STR-DE185

SERVICE MANUAL

Ver 1.0 2002. 02

US Model
AEP Model
UK Model

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 8 ohm loads, both channels driven, from 40 – 20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.09 % total harmonic distortion from 250 milliwatts to rated output (Models of area code US only).

Amplifier section

POWER OUTPUT

Models of area code US
Rated Power Output at Stereo Mode
(8 ohms 40 Hz – 20 kHz, THD 0.09 %)
100 W + 100 W

Models of area code AEP, UK
Rated Power Output at Stereo Mode
(8 ohms 1 kHz, THD 0.7 %)
100 W + 100 W [1)]

1) Measured under the following conditions:

Area code	Power requirements
AEP, UK	230 V AC, 50 Hz

Frequency response

CD, MD/TAPE, VIDEO 1, VIDEO 2	20 Hz – 50 kHz +0/–0.5 dB (with bass boost bypassed)

Inputs (Analog)

CD, MD/TAPE, VIDEO 1, VIDEO 2	Sensitivity: 250 mV Impedance: 50 kilohms S/N [2)] : 85 dB (A, 250 mV [3)])

2) INPUT SHORT.
3) Weighted network, input level.

Outputs

MD/TAPE, VIDEO 1	Voltage: 250 mV Impedance: 10 kilohms

Bass Boost:	+8 dB at 70 Hz
Tone:	±10 dB at 100 Hz and 10 kHz

FM tuner section

Tuning range	87.5 – 108.0 MHz
Antenna terminals	75 ohms, unbalanced
Intermediate frequency	10.7 MHz
Sensitivity	
Mono:	18.3 dBf, 2.2 µV/75 ohms
Stereo:	38.3 dBf, 22.5 µV/75 ohms
Usable sensitivity	11.2 dBf, 1 µV/75 ohms
S/N	
Mono:	76 dB
Stereo:	70 dB
Harmonic distortion at 1 kHz	
Mono:	0.5%
Stereo:	0.8%
Separation	35 dB at 1 kHz
Frequency response	30 Hz – 15 kHz, +0.5/–2 dB
Selectivity	60 dB at 400 kHz

– Continued on next page –

FM STEREO/FM-AM RECEIVER

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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

AM tuner section

Tuning range
Models of area code US
With 10-kHz tuning scale: 530 – 1710 kHz [4)]
With 9-kHz tuning scale: 531 – 1710 kHz [4)]

Models of area code AEP, UK
With 9-kHz tuning scale: 531 – 1602 kHz

Antenna	Loop antenna
Intermediate frequency	450 kHz
Usable sensitivity	50 dB/m (at 1,000 kHz or 999 kHz)
S/N	45 dB (at 50 mV/m)
Harmonic distortion	1.0 % (50 mV/m, 400 Hz)
Selectivity	
At 9 kHz:	35 dB
At 10 kHz:	40 dB

4) You can change the AM tuning scale to 9 kHz or 10 kHz. After tuning in any AM station, turn off the receiver. Hold down PRESET TUNING + and press **I/⏻**. All preset stations will be erased when you change the tuning scale. To reset the scale to 10 kHz (or 9 kHz), repeat the procedure.

General

Power requirements

Area code	Power consumption
US	120 V AC, 60 Hz
AEP, UK	230 V AC, 50/60 Hz

Power consumption

Area code	Power consumption
US	190 W
AEP, UK	210 W

Power consumption (during standby mode)
0.5 W (for models of all area code)

AC outlets

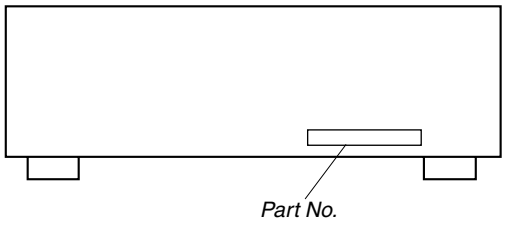
Area code	AC outlets
US	1 switched, 120 W/1A MAX
AEP, UK	1 switched, 100 W MAX

Dimensions	430 × 145 × 300 mm (16 7/8 × 5 6/8 × 11 6/8 in.) including projecting parts and controls
Mass (Approx.)	7.0 kg (15 lb 7 oz)

Supplied accessories
FM wire antenna (1)
AM loop antenna (1)
Remote commander RM-U185 (1)
R6 (size-AA) batteries (2)

Design and specifications are subject to change without notice.

MODEL IDENTIFICATION
— BACK PANEL —



MODEL	PART No.
US	4-238-277-0☐
AEP	4-238-277-1☐
UK	4-238-277-2☐

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

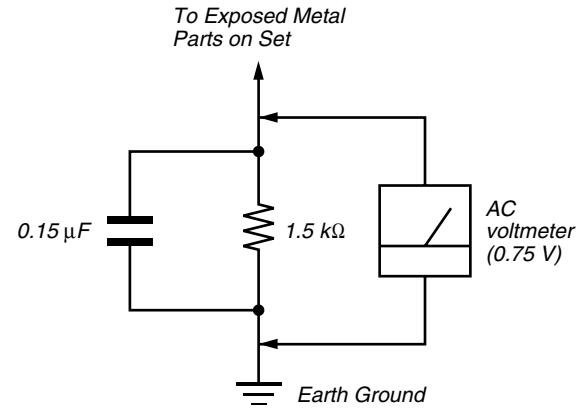


Fig. A. Using an AC voltmeter to check AC leakage.

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SECTION 1
GENERAL

This section is extracted from instruction manual.

List of Button Locations and Reference Pages

How to use this page

Use this page to find the location of buttons that are mentioned in the text.

Illustration number
↓
NAME 5 (18)
↑ Name of button/part
↑ Reference page

Main unit

ALPHABETICAL ORDER

A – H

AM 8 (13, 14)
BALANCE L/R 10 (12)
BASS +/– 21 (12)
BASS BOOST 19 (12)
CD 15 (8, 12)
DIRECT 25 (13)
DISPLAY 11 (12, 16)
Display 9 (11-16, 18, 19)
FM 6 (13, 14)
FM MODE 23 (14)

I – O

IR (receptor) 2 (4, 22)
MASTER VOLUME 17 (12, 20)
MD/TAPE 14 (8, 12)
MEMORY/ENTER 24 (13, 15, 18)
MUTING 18 (12, 20)
NAME 5 (18)
Numeric buttons 3 (13)

P – S

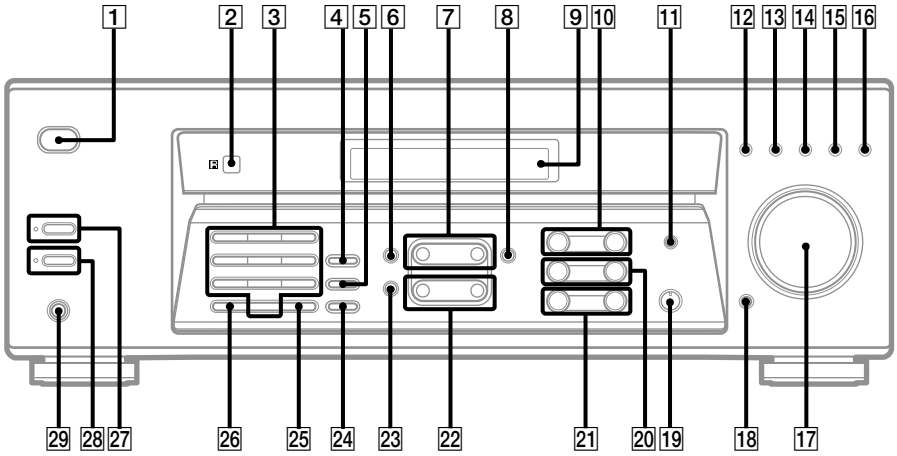
PHONES 29 (12, 21)
PRESET/PTY SELECT +/– (models of area code CEL, CEK) 7 (15, 16)
PRESET TUNING +/– (models of area code U) 7 (15, 23)
PTY (models of area code CEL, CEK) 4 (16)
SHIFT 26 (15)
SLEEP (models of area code U) 4 (19)
SPEAKERS A 27 (10, 12)
SPEAKERS B 28 (10, 12)

T – Z

TREBLE +/– 20 (12)
TUNER 16 (8, 12-15, 18)
TUNING/CHAR +/– 22 (14, 18)
VIDEO 1 12 (12)
VIDEO 2 13 (8, 12)

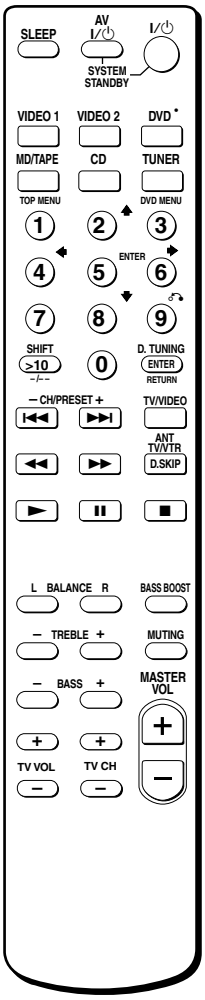
BUTTON DESCRIPTIONS

I/⏻ (power) 1 (11, 13, 23)



Remote button description

You can use the remote RM-U185 to operate the components in your system.



The tables below show the settings of each button.

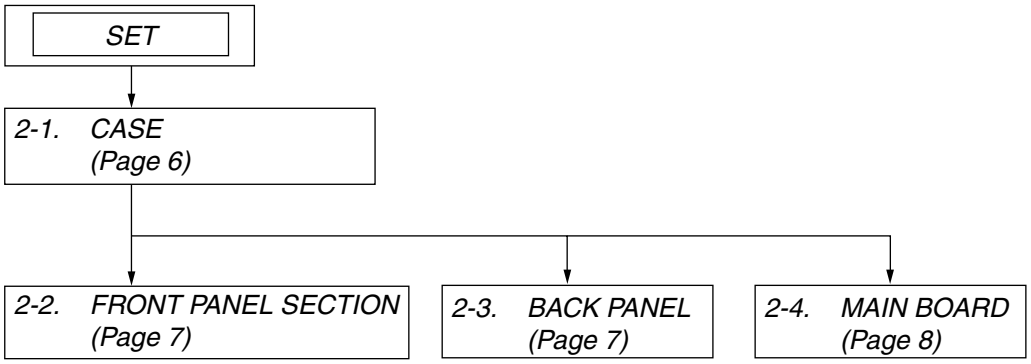
Remote Button	Operations	Function
SLEEP	Receiver	Activates the sleep function and the duration which the receiver turns off automatically.
I/⏻	Receiver	Turns the receiver on or off.
VIDEO 1	Receiver	To watch VCR. (VTR mode 3)
VIDEO 2	Receiver	To watch VCR. (VTR mode 1)
DVD	Receiver	To watch DVD.
MD/TAPE	Receiver	To listen to Minidisc or audio tape.
CD	Receiver	To listen to compact disc.
TUNER	Receiver	To listen to radio programs.
SHIFT	Receiver	Press repeatedly to select a memory page for presetting radio stations or tuning to preset stations.
D.TUNING	Receiver	Tuner station direct key-in-mode.
BALANCE L/R	Receiver	Adjust the balance.
BASS BOOST	Receiver	Reinforce the bass.
TREBLE +/–	Receiver	Adjust the treble tone quality.
MUTING	Receiver	Mutes the sound from the receiver.
BASS +/–	Receiver	Adjust the bass tone quality.

Note

When you press the function buttons (VIDEO 1, VIDEO 2, DVD), the input mode of the TV might not switch to the corresponding input mode that you want. In this case, press the TV/VIDEO button to switch the input mode of the TV.

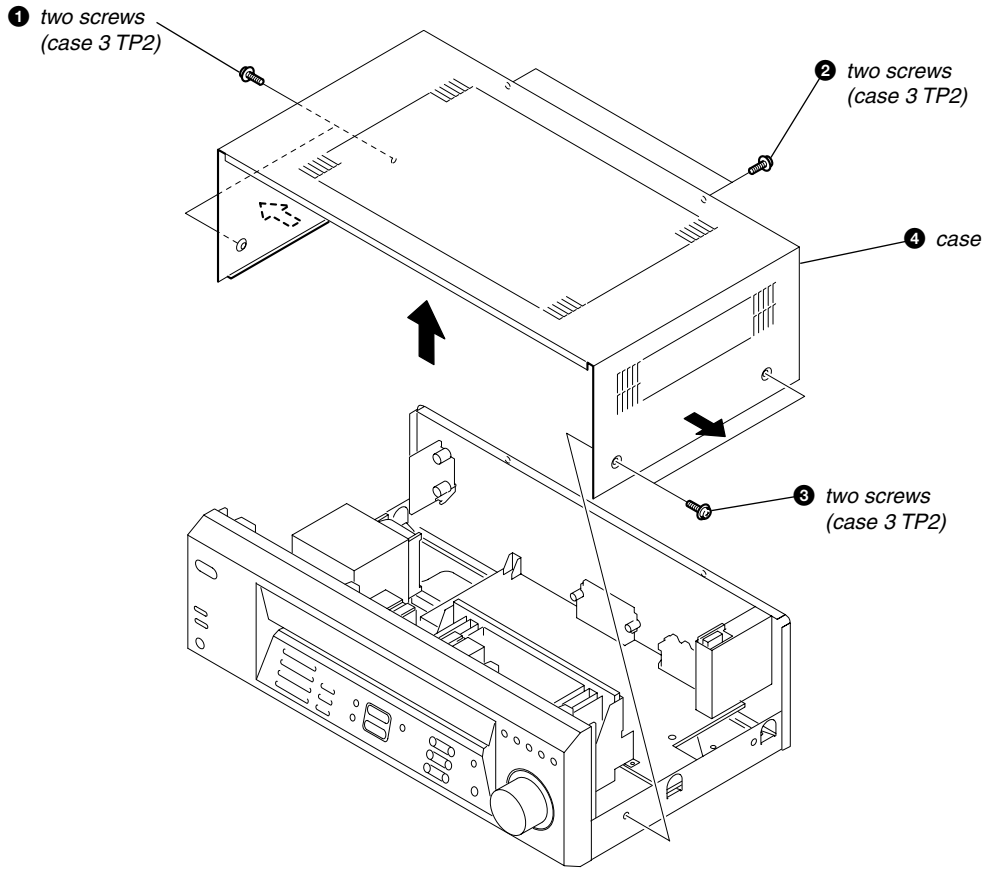
SECTION 2
DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

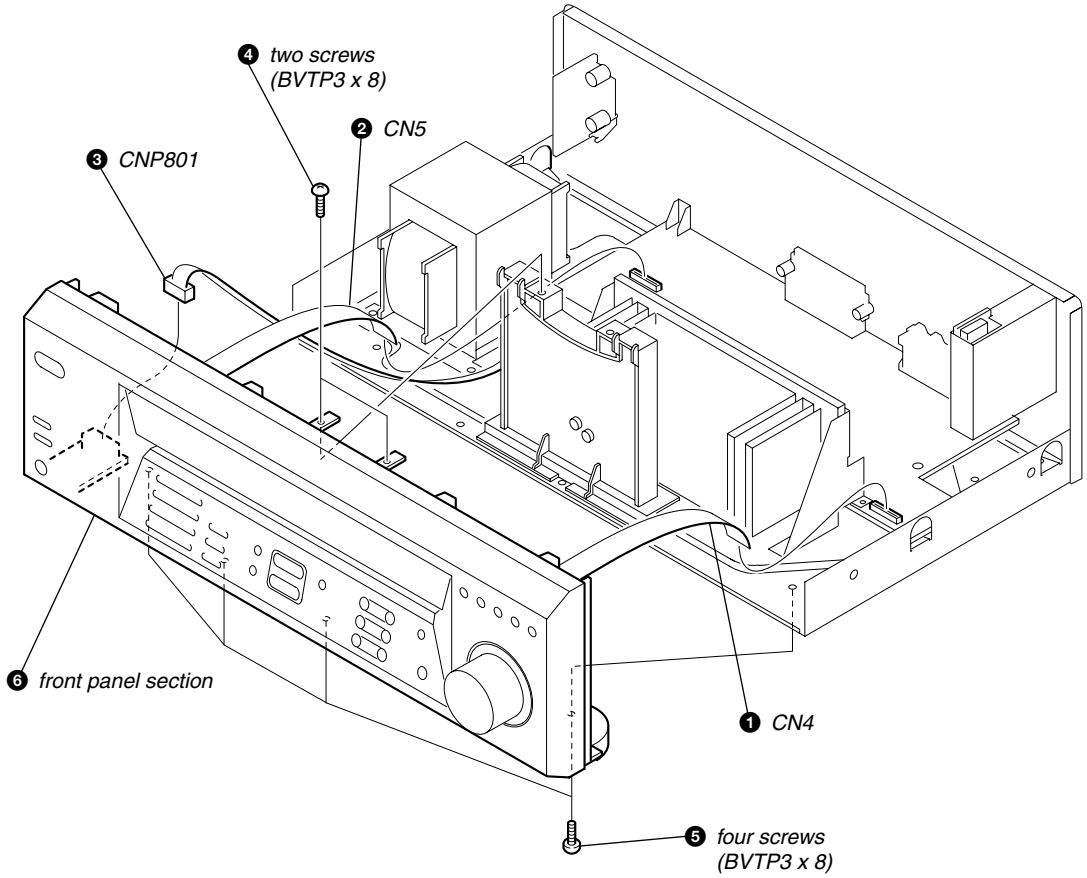


Note : Follow the disassembly procedure in the numerical order given.

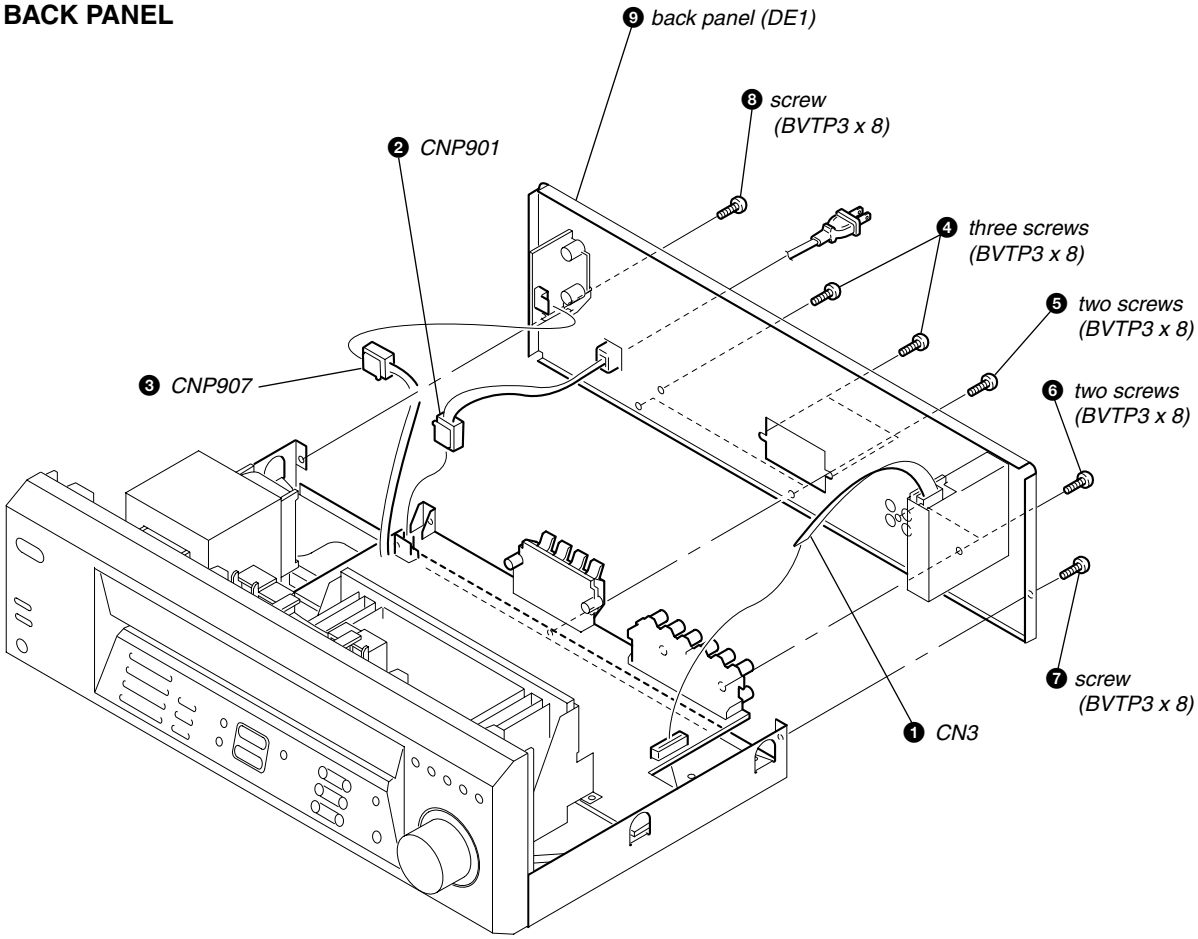
2-1. CASE



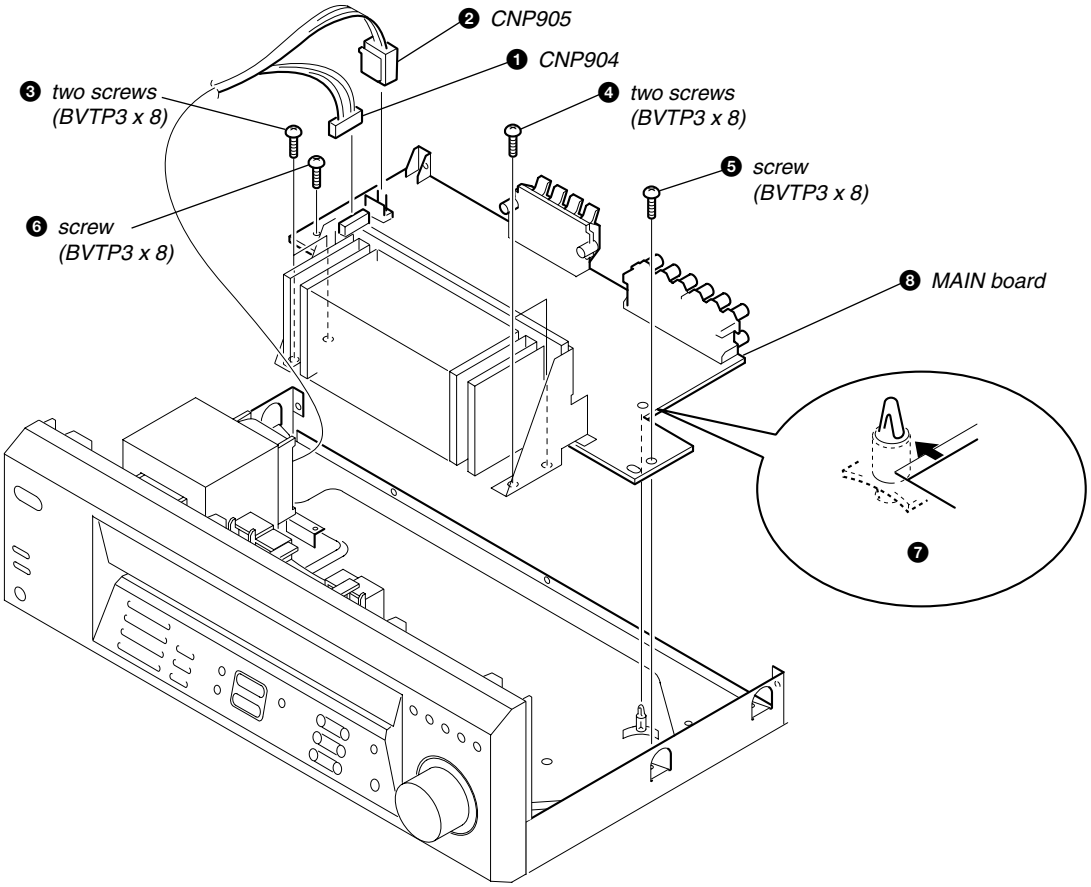
2-2. FRONT PANEL SECTION



2-3. BACK PANEL



2-4. MAIN BOARD



SECTION 3
TEST MODE

Fluorescent Indicator Tube Test Mode

All fluorescent segments are tested. When this test is activated, all segments turn on at the same time, then each segment turns on one after another.

Procedure:

1. While pressing the five function buttons of [VIDEO 1], [VIDEO 2], [MD/TAPE], [CD] and [TUNER] simultaneously, press the [I/⏻] button to turn the power ON.
2. The FL tube will illuminate in half light on. The following display will be repeated whenever the five function buttons are pressed.

• Operation of function buttons

all light on → half light on 1 → half light on 2 → all light off

3. Press any button other than the function buttons to release the check mode.

AUTO-BETICAL Check Mode (AEP, UK models)

To auto-scanning and memories of RDS station.

Procedure:

1. While pressing the [MEMORY/ENTER] button, press the [I/⏻] button to turn the power ON.
2. The message “AUTO-BETICAL SELECT” are scrolled.

AM Tuning Interval Selection Mode (US model)

Either 9 kHz step or 10 kHz step can be selected for the AM tuning interval.

Procedure:

1. While pressing the [TUNING/CHAR +] button, press the [I/⏻] button to turn the power ON.
2. Either the message “9k STEP” or “10k STEP” appears.
3. Select the desired step.

Software Version Display Mode

The software version is displayed.

Procedure:

1. While pressing the two buttons of [SPEAKERS B] and [VIDEO 1] simultaneously, press the [I/⏻] button to turn the power ON.
2. The software version is displayed.

ex.) US model : U *.**
AEP, UK model : CE *.**

Shift version
Area

SECTION 4
DIAGRAMS

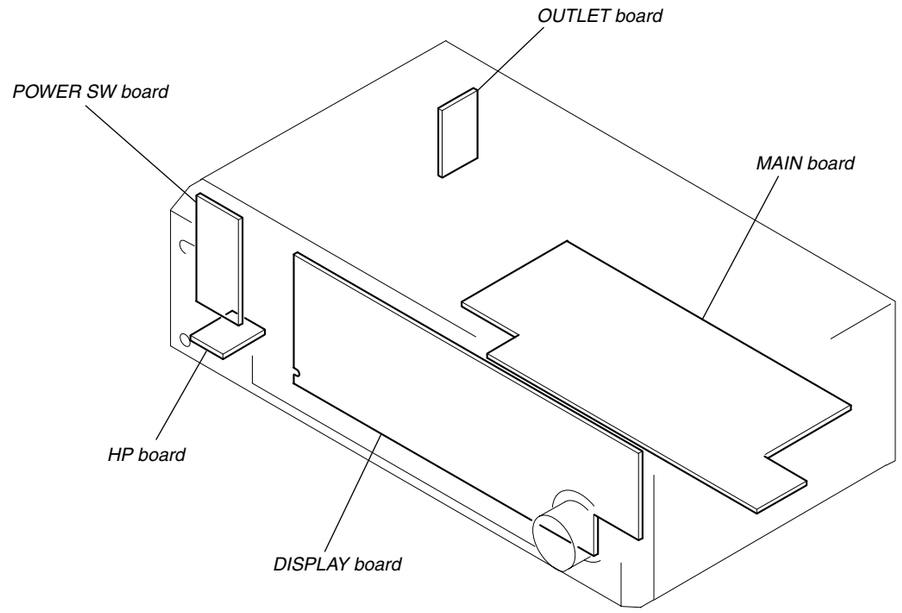
4-1. IC PIN DESCRIPTION

• IC201 µPD78044FGF-200-3B9 (SYSTEM CONTROLLER, FL DRIVER)

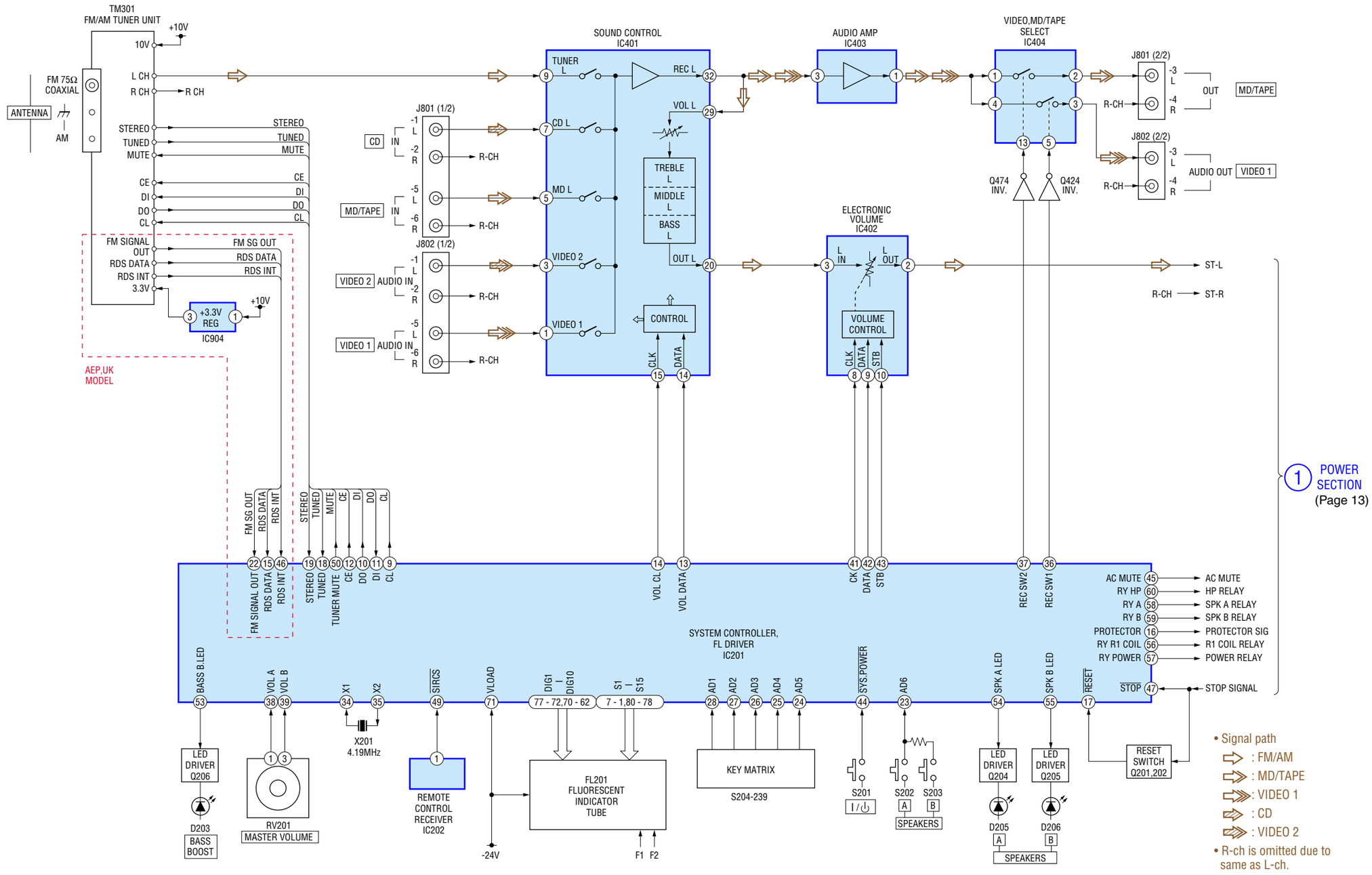
Pin No.	Pin Name	I/O	Pin Description
1 to 7	DIG7 to 1	O	Digit drive signal output to the fluorescent indicator tube (FL201).
8	+5V	—	Power supply pin (+5 V)
9	CL	O	Serial clock signal output to FM/AM tuner pack.
10	DO	O	Serial data signal output to FM/AM tuner pack.
11	DI	I	Serial data signal input from FM/AM tuner pack.
12	CE	O	Serial chip enable signal output to FM/AM tuner pack.
13	VOL DATA	O	Serial data signal output to sound control IC.
14	VOL CE	O	Serial clock signal output to sound control IC.
15	RDS DATA	I	RDS data signal input from FM/AM tuner pack. (AEP, UK model only)
16	PROTECTOR	I	Overload detection signal input
17	$\overline{\text{RESET}}$	I	Reset signal input
18	TUNED	I	TUNED indicator detection signal input from FM/AM tuner pack.
19	STEREO	I	STEREO indicator detection signal input from FM/AM tuner pack.
20	AVSS	—	Analog ground
21	VERSION	I	Destination select signal input (Fixed at H: US model, L: AEP, UK model)
22	FM SIGNAL OUT	I	FM/AM signal meter voltage detection signal input from FM/AM tuner pack. (AEP, UK model only)
23 to 28	AD6 to 1	I	Function keys signal input
29	AVDD	—	A/D converter power supply pin (+5 V)
30	AVREF	—	A/D converter reference voltage input (+5 V)
31	NC	—	Not used. (Connect to AVREF pin in this set)
32	OPEN	—	Not used. (Open)
33	GND	—	Ground
34	X1	I	Master clock input (4.19 MHz)
35	X2	O	Master clock output (4.19 MHz)
36	REC SW1	O	VIDEO 1 ON/OFF signal output
37	REC SW2	O	MD/TAPE ON/OFF signal output
38, 39	VOL A, B	I	Master volume JOG data input A, B
40	FUNC.MUTE	O	Not used. (Fixed at L in this set)
41	CK	O	Serial clock signal output to electoric volume IC.
42	DATA	O	Serial data signal output to electoric volume IC.
43	STB	O	Serial data strobe signal output to electoric volume IC.
44	$\overline{\text{SYS.POWER}}$	I	System power signal input
45	AC MUTE	O	A-Class mute signal output
46	RDS INT	I	RDS clock signal input from FM/AM tuner pack. (AEP, UK model only)
47	STOP	I	Stop signal input from reset signal generator IC.
48	VSS	—	Ground
49	$\overline{\text{SIRCS}}$	I	Sircs signal input from remote control receiver IC.
50	TUNER MUTE	O	Muting control signal output to FM/AM tuner pack.
51	NC	—	Not used. (Open)
52	+5V	—	Power supply pin (+5 V)
53	BASS B. LED	O	BASS BOOST LED drive signal output
54	SPK A LED	O	SPEAKERS A LED drive signal output
55	SPK B LED	O	SPEAKERS B LED drive signal output

Pin No.	Pin Name	I/O	Pin Description
56	RY R1 COIL	O	Power relay (12V) drive signal output
57	RY POWER	O	AC power relay (9V) drive signal output
58	RY A	O	Speakers A relay (12V) drive signal output
59	RY B	O	Speakers B relay (12V) drive signal output
60	RY HP	O	Phones relay (12V) drive signal output
61	NC	—	Not used. (Open)
62 to 70	S15 to 7	O	Segment drive signal output to the fluorescent indicator tube (FL201).
71	VLOAD	—	Power supply pin (-24 V)
72 to 77	S6 to 1	O	Segment drive signal output to the fluorescent indicator tube (FL201).
78 to 80	DIG10 to 8	O	Digit drive signal output to the fluorescent indicator tube (FL201).

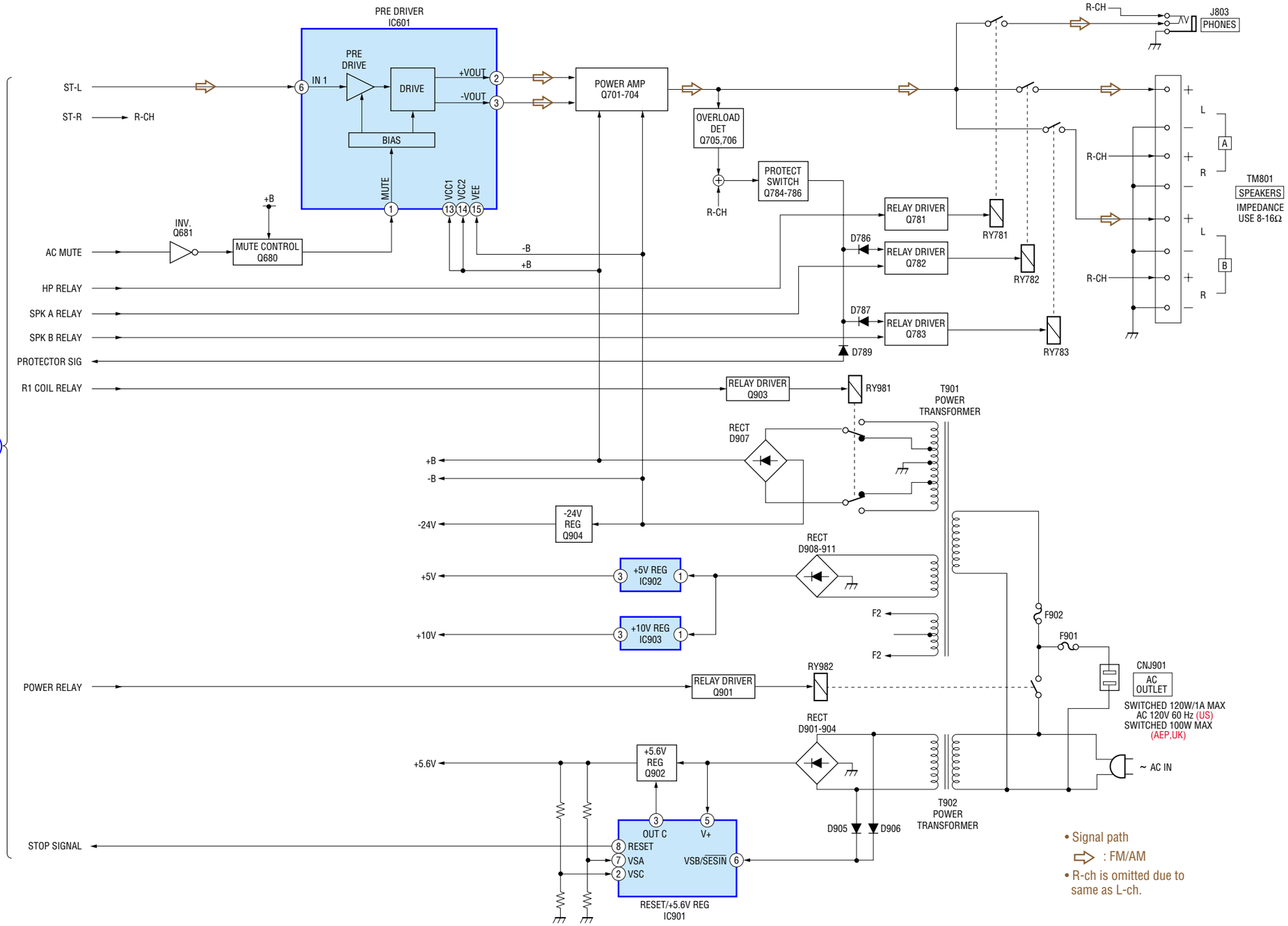
4-2. CIRCUIT BOARDS LOCATION



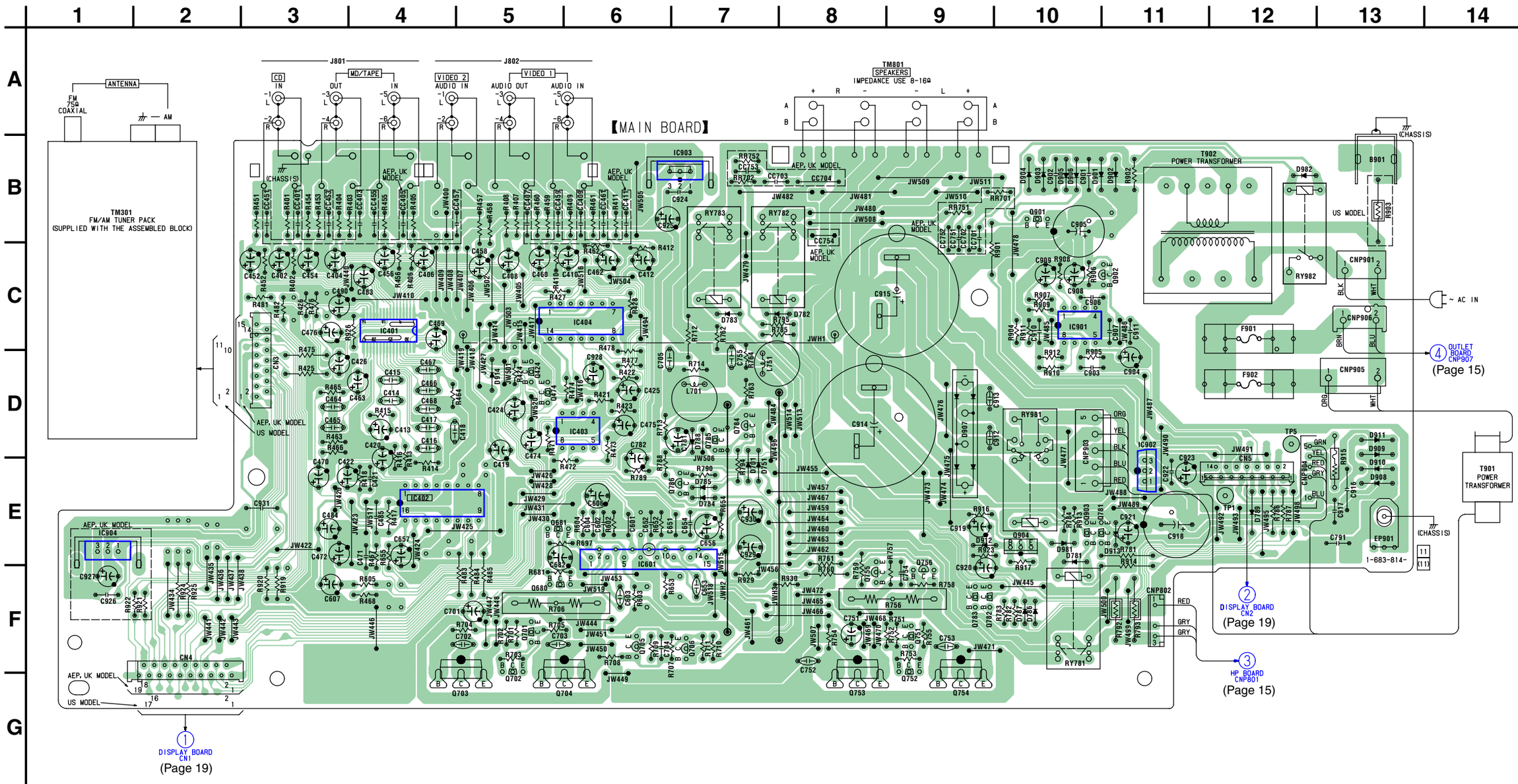
4-3. BLOCK DIAGRAM — MAIN SECTION —



4-4. BLOCK DIAGRAM — POWER SECTION —



4-5. PRINTED WIRING BOARD — MAIN SECTION — • Refer to page 11 for Circuit Boards Location and page 15 for Common Note on Printed Wiring Boards.

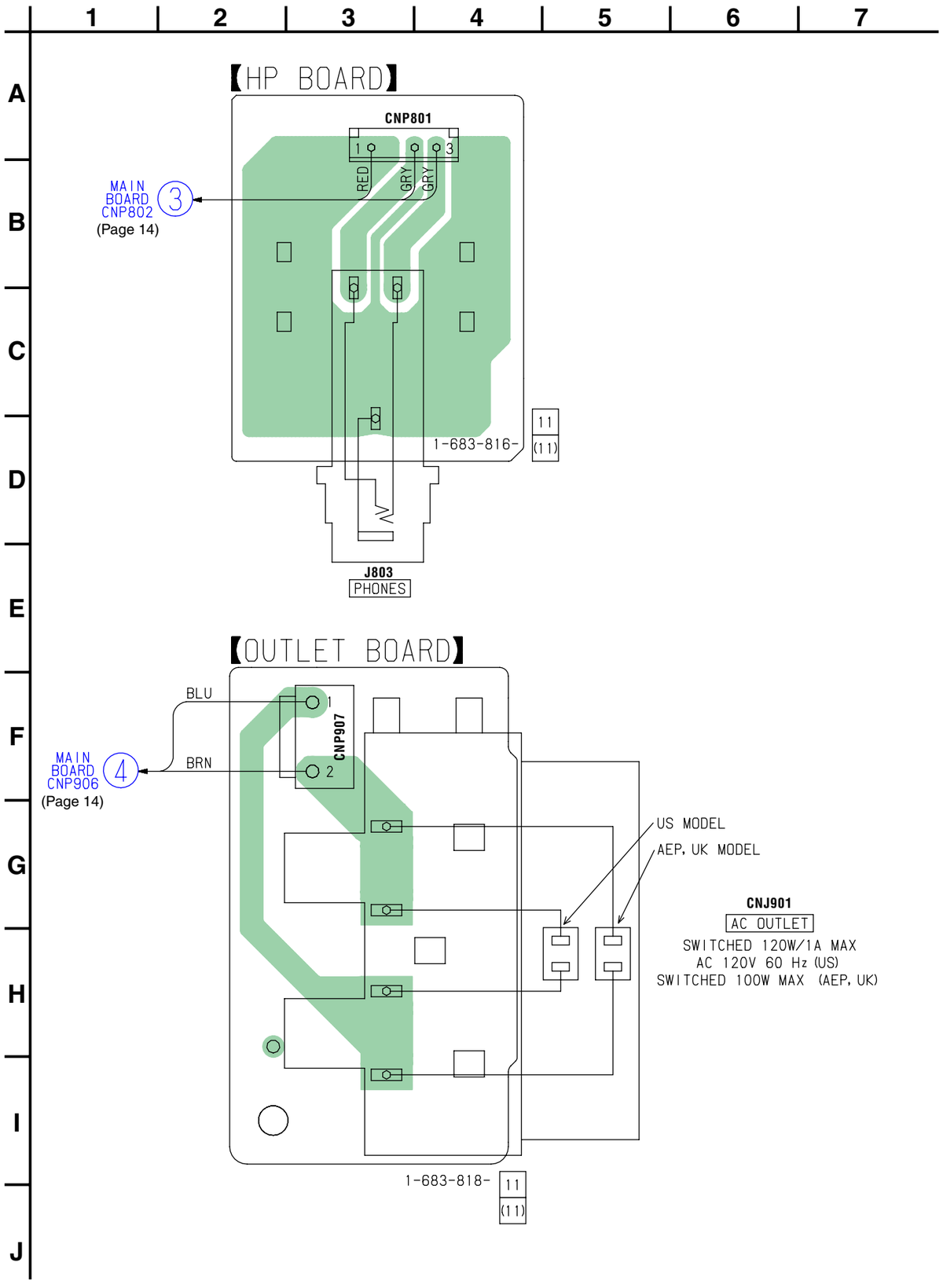


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D701	E-7	D906	B-10	IC601	E-6	Q751	G-9
D751	E-7	D907	D-9	IC901	C-10	Q752	G-9
D781	E-10	D908	E-13	IC902	D-11	Q753	G-8
D782	C-8	D909	D-13	IC903	B-7	Q754	G-9
D783	C-7	D910	E-13	(IC904)	E-1	Q755	F-8
D784	E-7	D911	D-13			Q756	E-9
D785	E-7	D912	E-9	Q424	D-5	Q781	E-10
D786	F-10	D913	E-11	Q474	D-5	Q782	F-9
D787	F-10	D914	D-5	Q680	F-5	Q783	F-9
D788	D-7	D981	E-10	Q681	E-5	Q784	D-7
D789	E-12	D982	B-12	Q701	F-5	Q785	D-7
D901	B-10			Q702	G-5	Q786	E-6
D902	B-11	IC401	C-4	Q703	G-4	Q901	B-10
D903	B-10	IC402	E-4	Q704	G-6	Q902	C-11
D904	B-10	IC403	D-6	Q705	F-6	Q903	E-10
D905	B-10	IC404	C-6	Q706	F-7	Q904	E-10

( ) : AEP, UK model

4-6. PRINTED WIRING BOARDS — H/P, OUTLET SECTION — • Refer to page 11 for Circuit Boards Location.



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

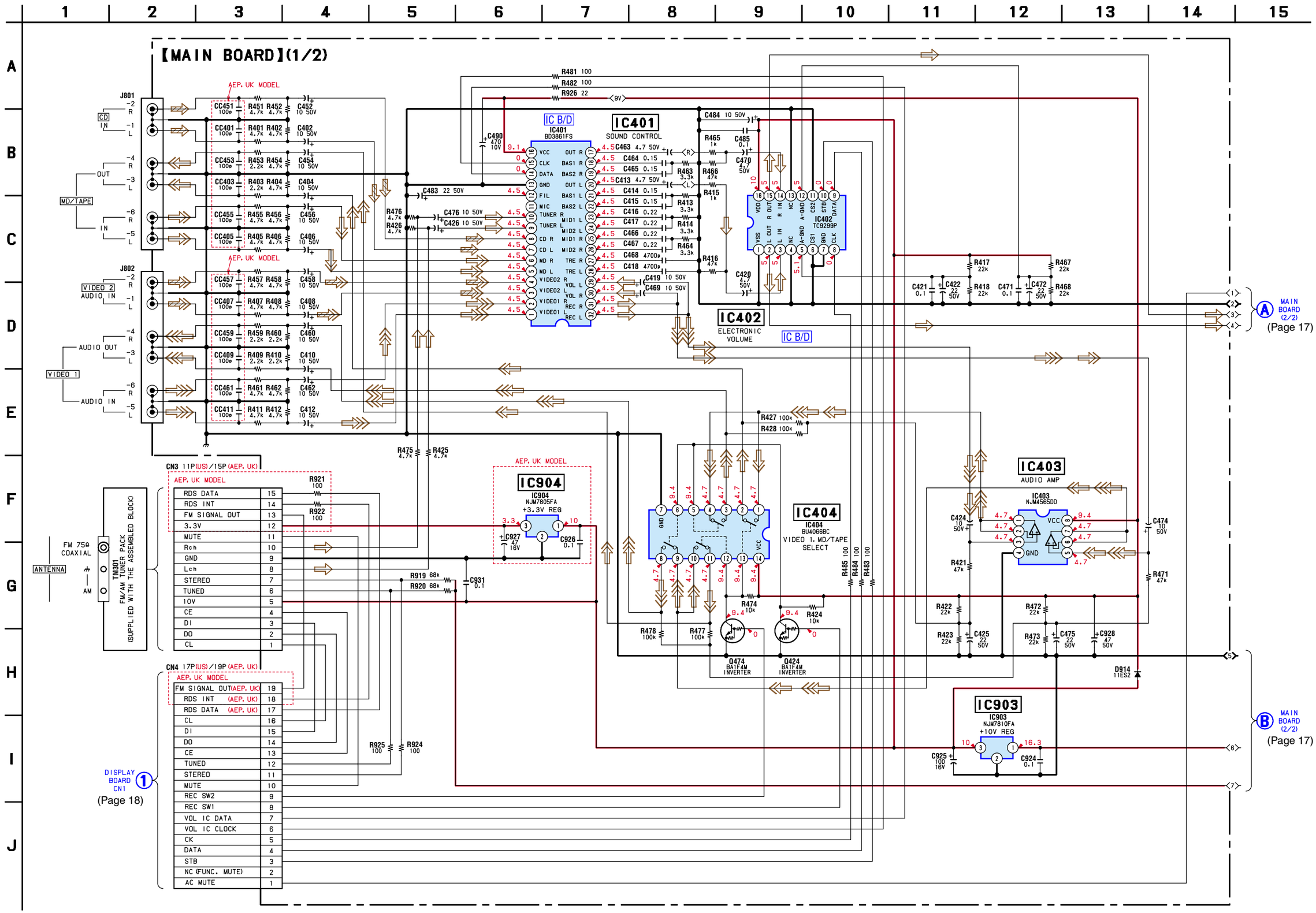
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- : B+ Line.
- : B– Line.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : FM/AM
  : MD/TAPE
  : VIDEO 1
  : CD
  : VIDEO 2

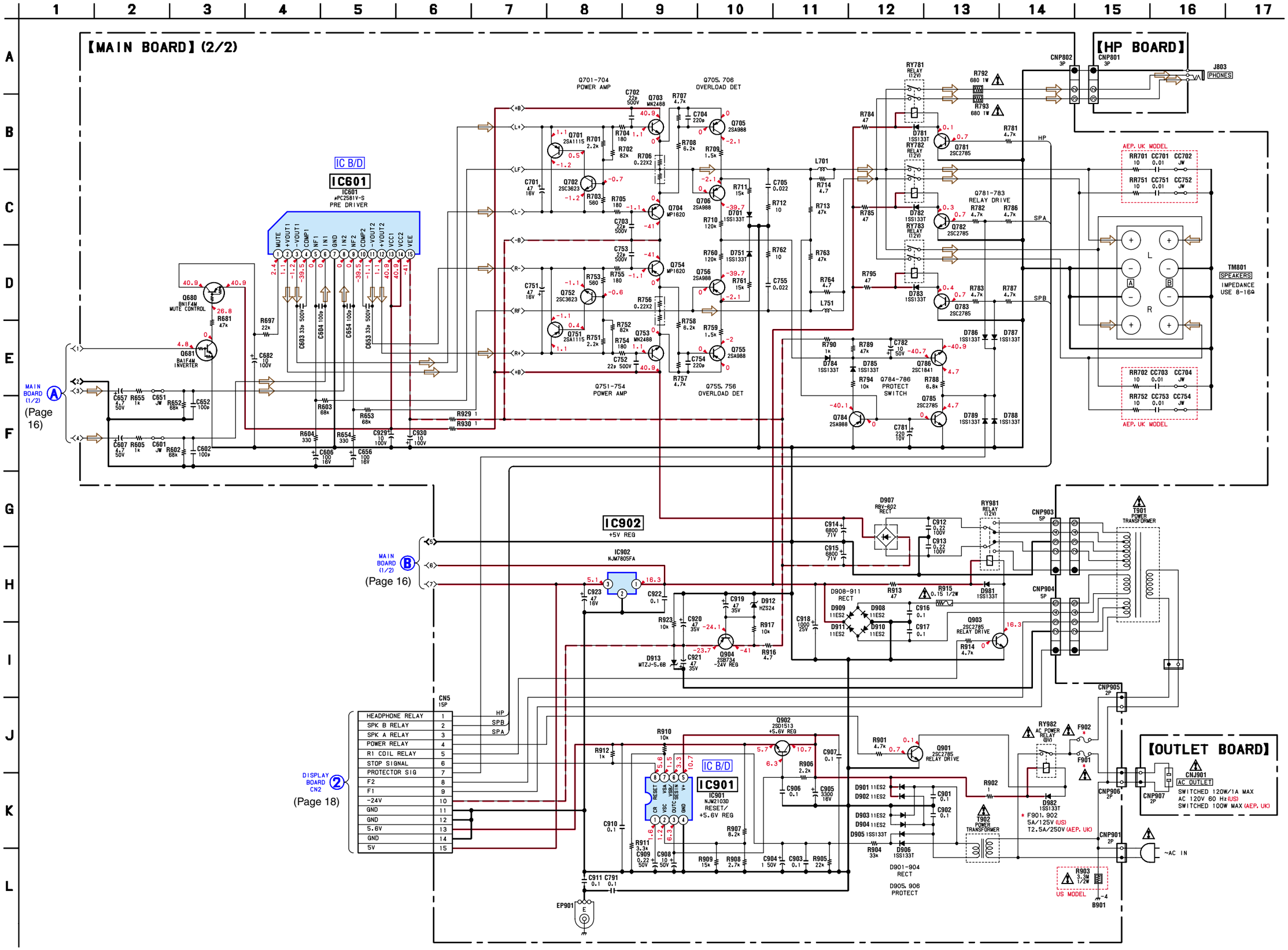
for printed wiring boards:

- ○——— : parts extracted from the component side.
- △ : internal component.
- : Pattern from the side which enables seeing.

4-7. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) — • Refer to page 15 for Common Note on Schematic Diagram and page 20 for IC Block Diagrams.

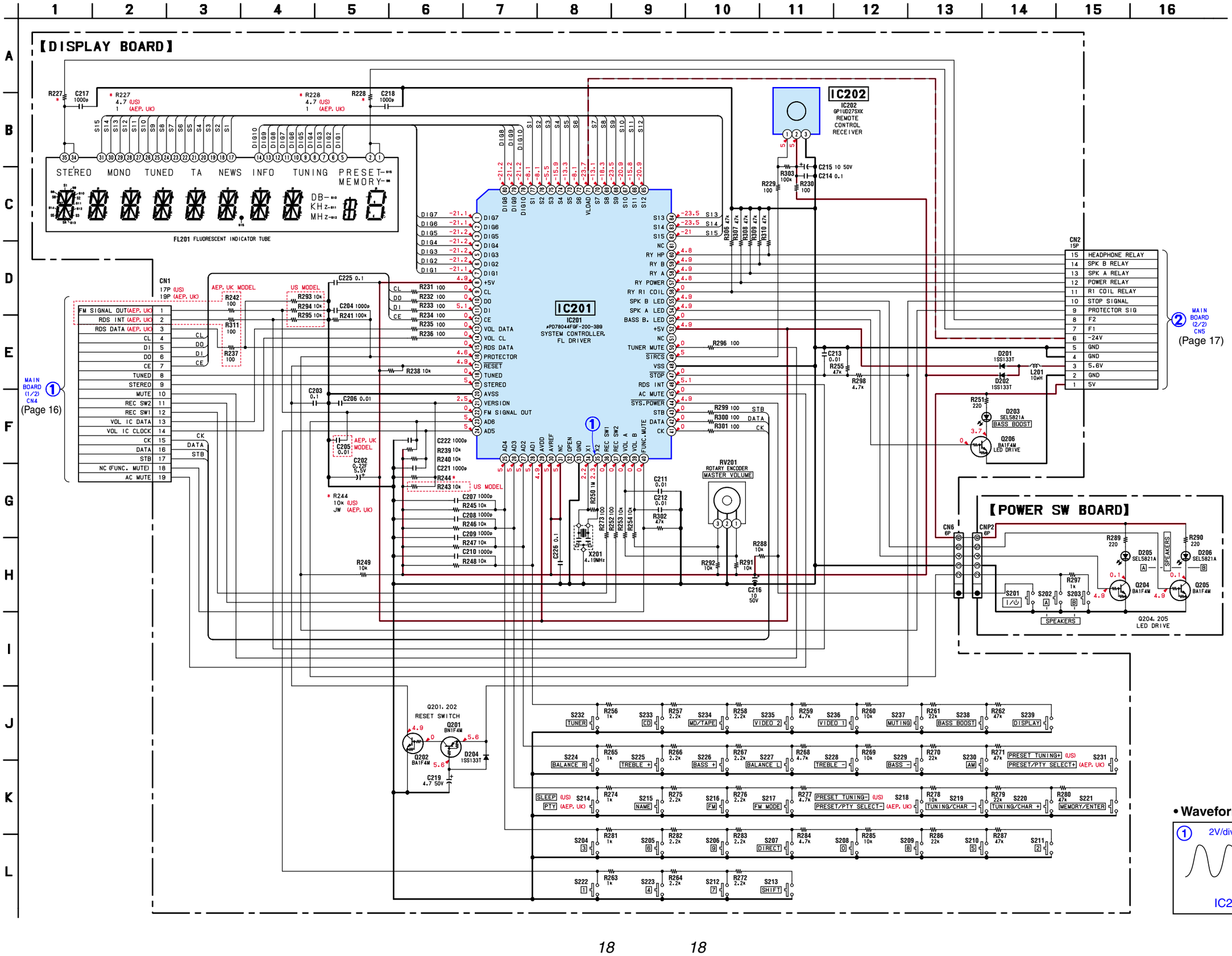


4-8. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) — • Refer to page 15 for Common Note on Schematic Diagram and page 20 for IC Block Diagrams.

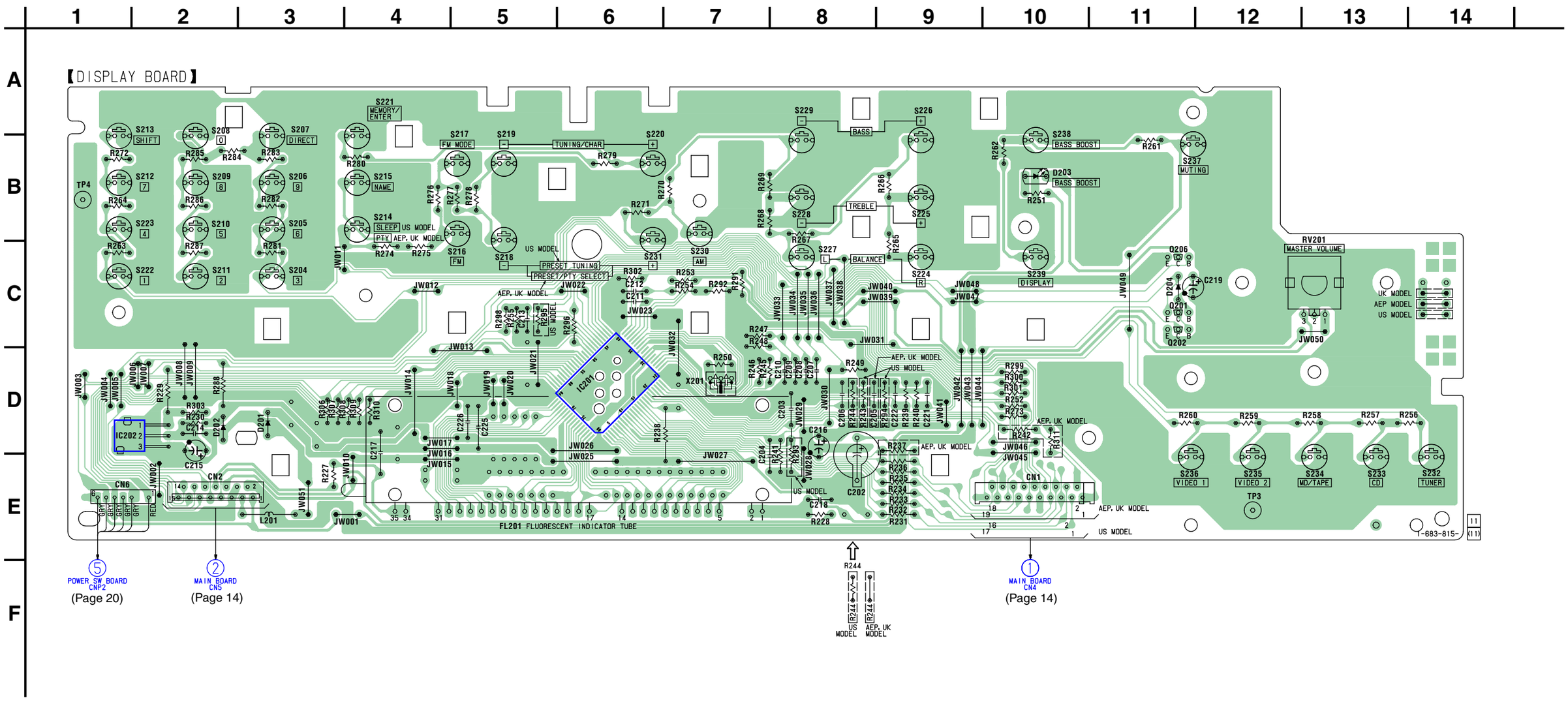


Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

4-9. SCHEMATIC DIAGRAM — DISPLAY SECTION — • Refer to page 15 for Common Note on Schematic Diagram.



4-10. PRINTED WIRING BOARD — DISPLAY SECTION — • Refer to page 11 for Circuit Boards Location and page 15 for Common Note on Printed Wiring Boards.

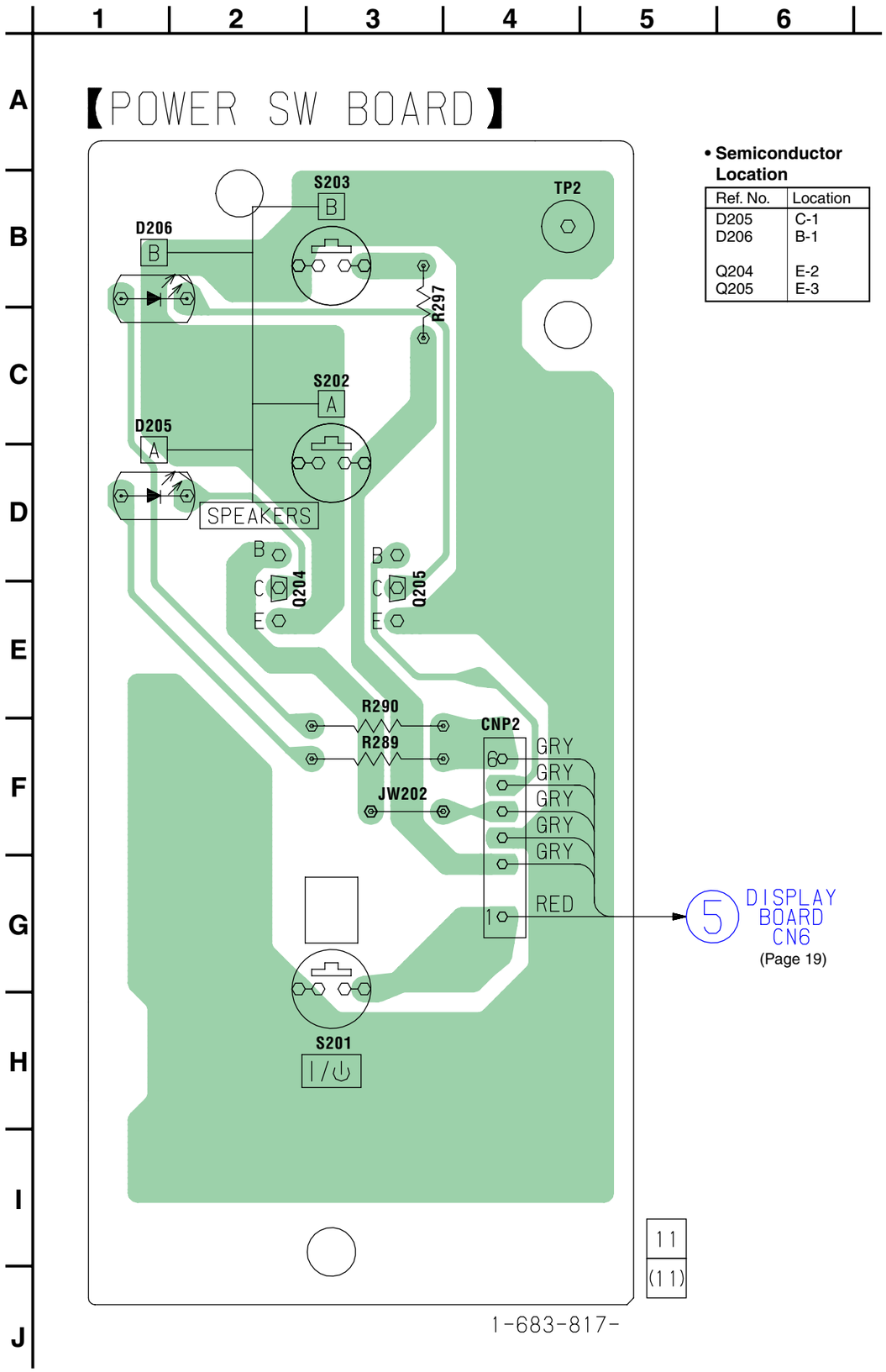


- **Semiconductor Location**

Ref. No.	Location
D201	D-3
D202	D-2
D203	B-10
D204	C-11
IC201	D-6
IC202	D-1
Q201	C-11
Q202	C-11
Q206	C-11

4-11. PRINTED WIRING BOARD — POWER SW SECTION —

- Refer to page 11 for Circuit Boards Location and page 15 for Common Note on Printed Wiring Boards.

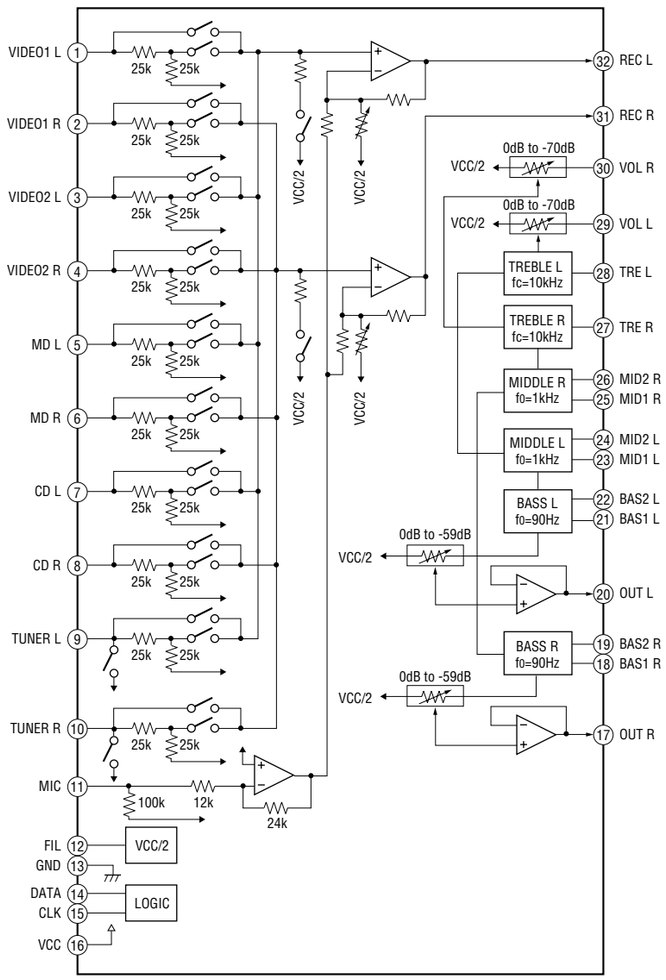


- **Semiconductor Location**

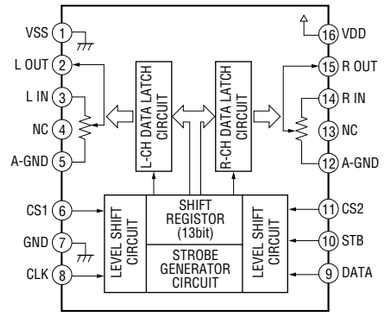
Ref. No.	Location
D205	C-1
D206	B-1
Q204	E-2
Q205	E-3

- **IC Block Diagrams**

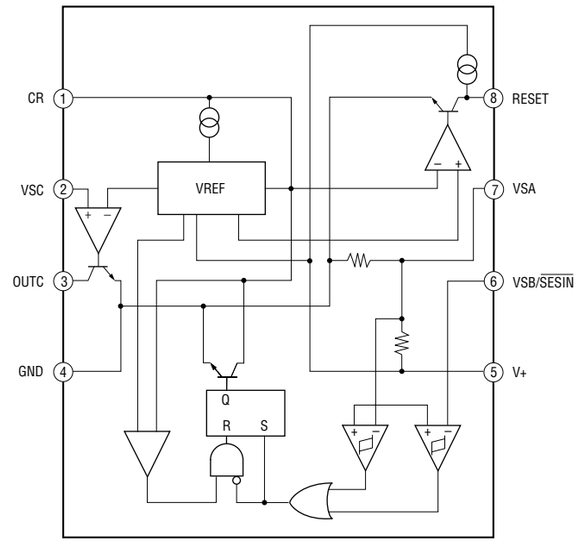
IC401 BD3861FS



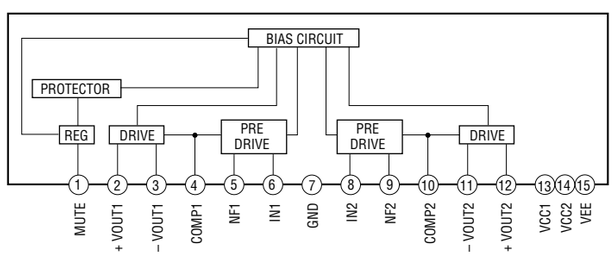
IC402 TC9299P



IC901 NJM2103D



IC601 µPC2581V-S

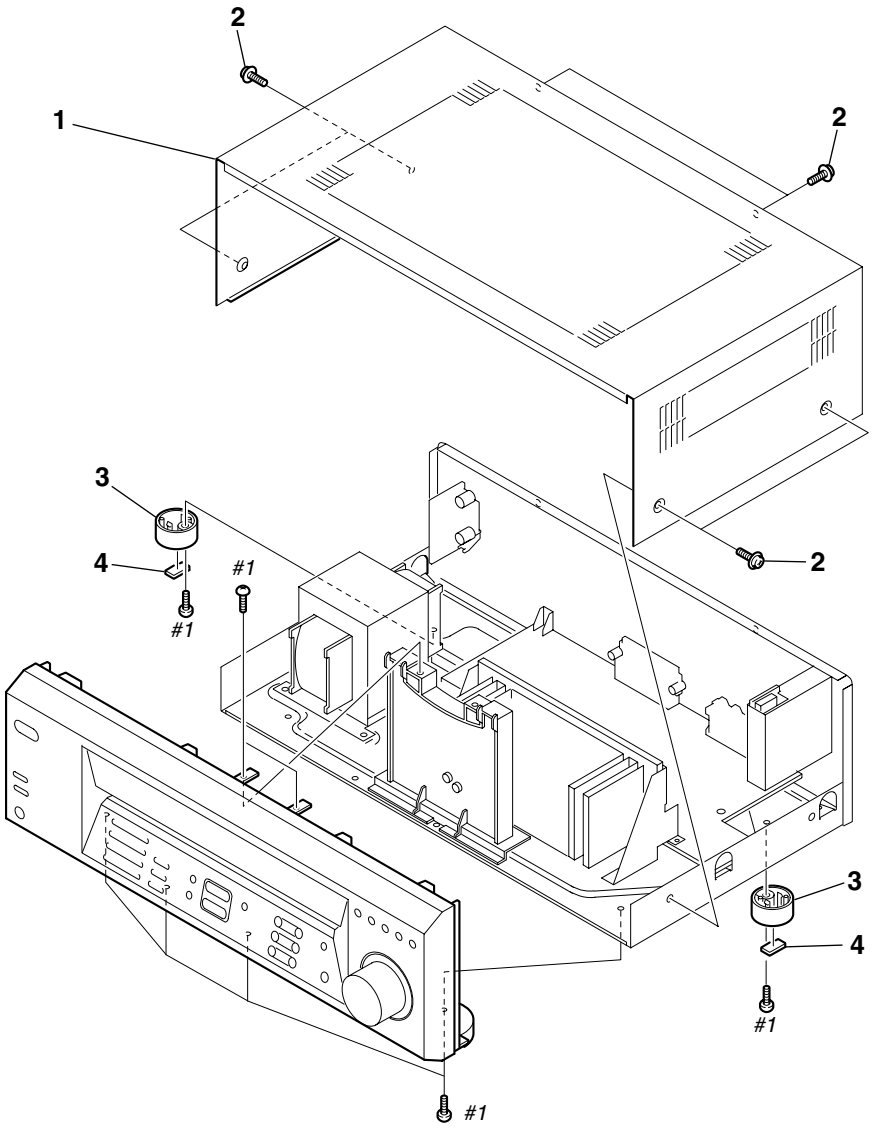


SECTION 5
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories are given in the last of this parts list.

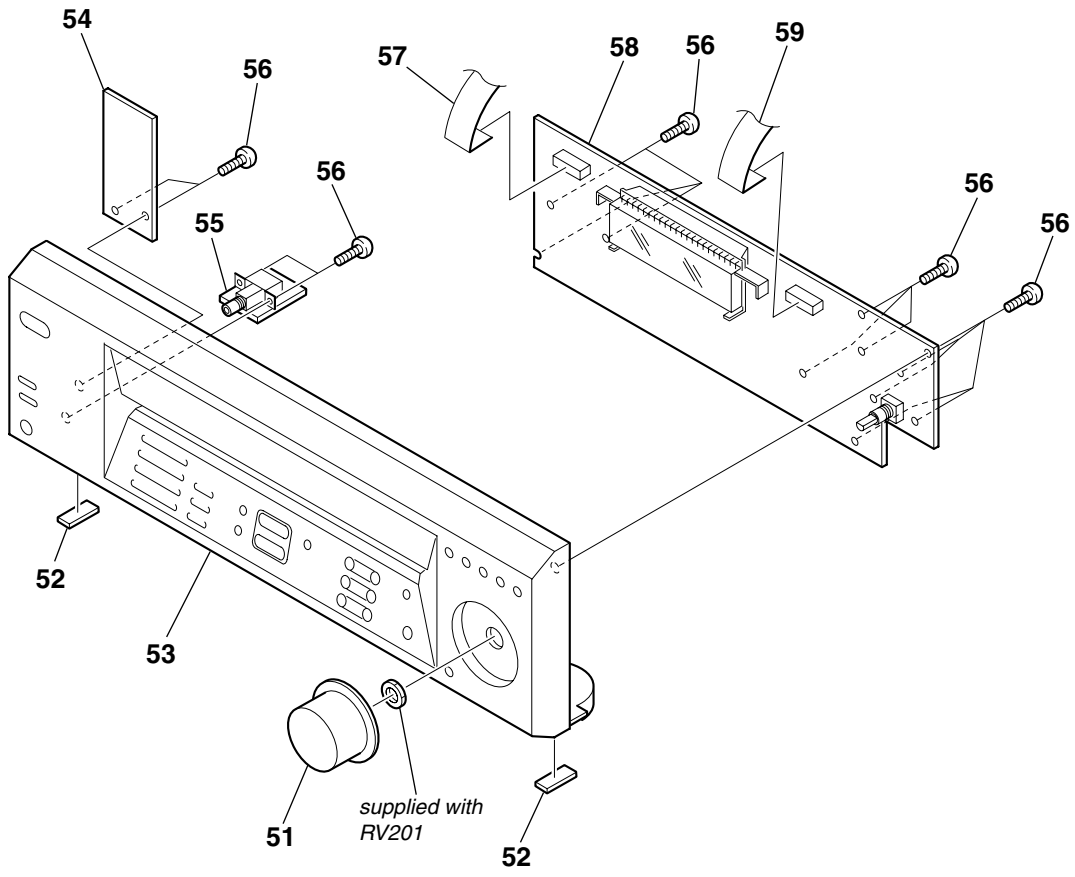
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. CASE SECTION



Ref. No.	Part No.	Description	Remark
1	4-232-118-01	CASE	
2	4-210-291-01	SCREW (CASE3 TP2)	
3	4-232-237-01	FOOT (DIA.30)	
4	4-921-941-01	CUSHION	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

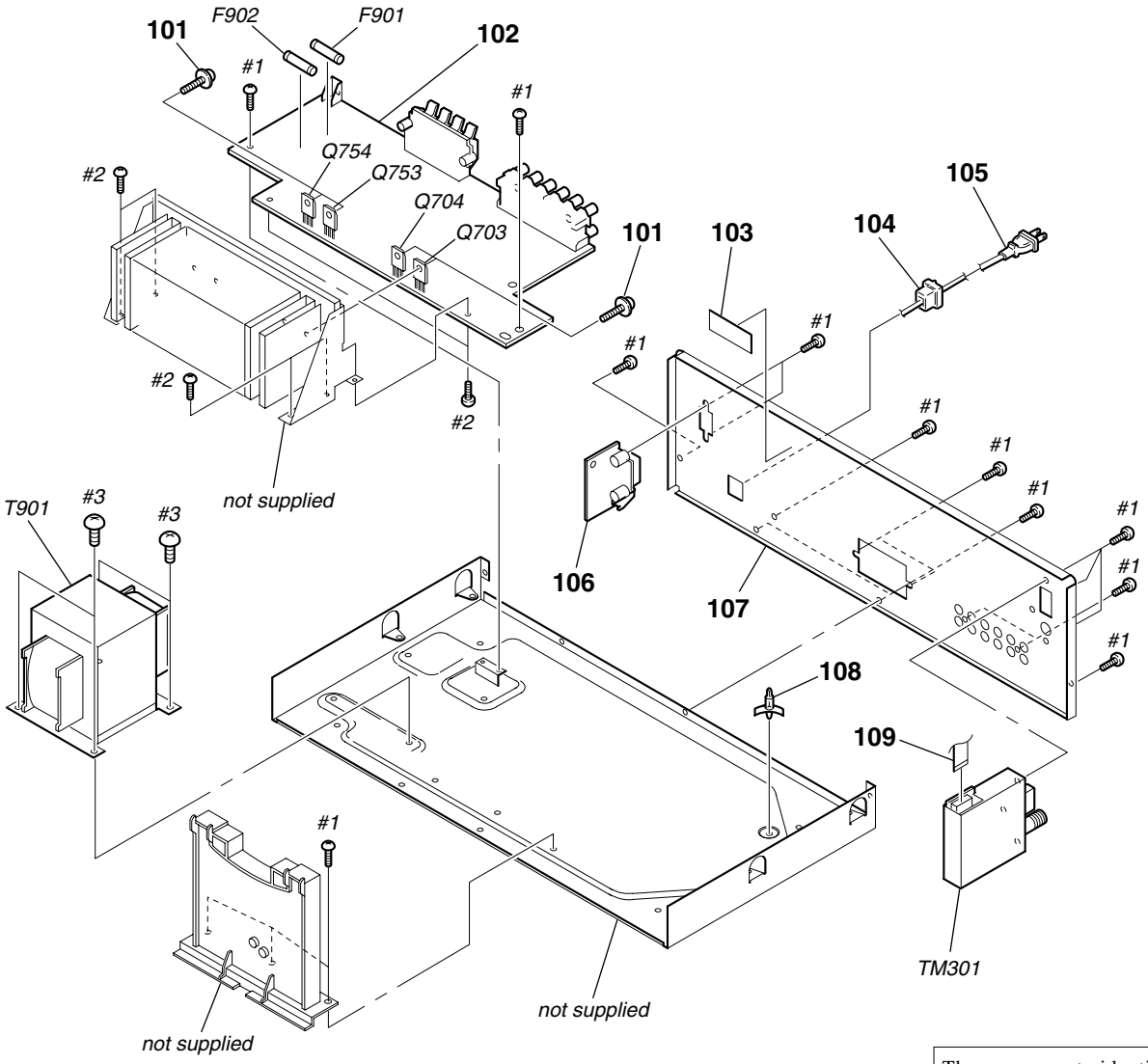
5-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-232-113-01	KNOB (VOL)	
52	4-921-941-01	CUSHION	
53	X-4954-453-1	PANEL ASSY, FRONT (US)	
53	X-4954-455-1	PANEL ASSY, FRONT (AEP,UK)	
54	1-683-817-11	POWER SW BOARD	
55	1-683-816-11	HP BOARD	

Ref. No.	Part No.	Description	Remark
56	4-951-620-01	SCREW (2.6X8), +BVTP	
57	1-765-332-11	WIRE (FLAT TYPE) (15 CORE)	
58	A-4727-878-A	DISPLAY BOARD, COMPLETE (US)	
58	A-4727-882-A	DISPLAY BOARD, COMPLETE (AEP,UK)	
59	1-773-054-11	WIRE (FLAT TYPE) (17 CORE) (US)	
59	1-773-125-11	WIRE (FLAT TYPE) (19 CORE) (AEP,UK)	

5-3. CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
101	3-905-609-01	SCREW (TRANSISTOR)	
102	A-4727-875-A	MAIN BOARD, COMPLETE (US)	
102	A-4727-881-A	MAIN BOARD, COMPLETE (AEP,UK)	
* 103	3-703-044-26	LABEL, CAUTION (US)	
104	3-703-244-00	BUSHING (FBS001), CORD	
⚠105	1-769-744-11	CORD, POWER (AEP,UK)	
⚠105	1-783-820-11	CORD, POWER (US)	
106	1-683-818-11	OUTLET BOARD	
107	4-238-277-01	PANEL (DE1), BACK (US)	
107	4-238-277-11	PANEL (DE1), BACK (AEP)	
107	4-238-277-21	PANEL (DE1), BACK (UK)	
108	4-924-098-01	HOLDER, PC BOARD	
109	1-769-943-11	WIRE (FLAT TYPE) (11 CORE) (US)	
109	1-773-007-11	WIRE (FLAT TYPE) (15 CORE) (AEP,UK)	
⚠F901	1-532-464-31	FUSE (T2.5A/250V) (AEP,UK)	
⚠F901	1-576-109-11	FUSE (5A/125V) (US)	

Ref. No.	Part No.	Description	Remark
⚠F902	1-532-464-31	FUSE (T2.5A/250V) (AEP,UK)	
⚠F902	1-576-109-11	FUSE (5A/125V) (US)	
Q703	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q704	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q753	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q754	8-749-010-26	TRANSISTOR MP1620-OPY-M	
⚠T901	1-437-625-11	TRANSFORMER, POWER (US)	
⚠T901	1-437-626-11	TRANSFORMER, POWER (AEP,UK)	
TM301	1-693-533-11	TUNER (FM/AM) (ANTENNA) (AEP,UK)	
TM301	1-693-534-71	TUNER (FM/AM) (ANTENNA) (US)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
#3	7-685-880-09	SCREW +BVTT 4X6 (S)	

DISPLAY

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4727-878-A	DISPLAY BOARD, COMPLETE (US)			
	A-4727-882-A	DISPLAY BOARD, COMPLETE (AEP,UK)			
		**********			
*	4-921-941-01	CUSHION (FL)			
	4-943-107-11	HOLDER (FL TUBE)			
		< CAPACITOR >			
C202	1-104-905-11	DOUBLE LAYERS	0.22F		5.5V
C203	1-164-159-21	CERAMIC	0.1uF		50V
C204	1-128-821-21	CERAMIC	0.001uF	5%	50V
C205	1-127-876-11	CERAMIC	0.01uF	10%	50V (AEP,UK)
C206	1-127-876-21	CERAMIC	0.01uF	10%	50V
C207	1-128-821-21	CERAMIC	0.001uF	5%	50V
C208	1-128-821-21	CERAMIC	0.001uF	5%	50V
C209	1-128-821-21	CERAMIC	0.001uF	5%	50V
C210	1-128-821-21	CERAMIC	0.001uF	5%	50V
C211	1-127-876-21	CERAMIC	0.01uF	10%	50V
C212	1-127-876-21	CERAMIC	0.01uF	10%	50V
C213	1-127-876-21	CERAMIC	0.01uF	10%	50V
C214	1-164-159-21	CERAMIC	0.1uF		50V
C215	1-126-795-11	ELECT	10uF	20%	50V
C216	1-126-795-11	ELECT	10uF	20%	50V
C217	1-128-821-21	CERAMIC	0.001uF	5%	50V
C218	1-128-821-21	CERAMIC	0.001uF	5%	50V
C219	1-126-794-11	ELECT	4.7uF	20%	50V
C221	1-128-821-21	CERAMIC	0.001uF	5%	50V
C222	1-128-821-21	CERAMIC	0.001uF	5%	50V
C225	1-164-159-21	CERAMIC	0.1uF		50V
C226	1-164-159-21	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN1	1-568-440-11	SOCKET, CONNECTOR 17P (US)			
CN1	1-569-323-11	SOCKET, CONNECTOR 19P (AEP,UK)			
CN2	1-569-321-11	SOCKET, CONNECTOR 15P			
CN6	1-779-977-11	PIN, CONNECTOR 6P			
		< DIODE >			
D201	8-719-991-33	DIODE 1SS133T-77			
D202	8-719-991-33	DIODE 1SS133T-77			
D203	8-719-046-39	LED SEL5821A-TP15 (BASS BOOST)			
D204	8-719-991-33	DIODE 1SS133T-77			

Ref. No.	Part No.	Description			Remark
		< FLUORESCENT INDICATOR >			
FL201	1-517-662-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC201	6-801-317-01	IC uPD78044FGF-200-3B9			
IC202	6-600-055-01	IC GP1UD27SXK			
		< COIL >			
L201	1-410-509-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q201	8-729-900-63	TRANSISTOR DTA124ES			
Q202	8-729-900-36	TRANSISTOR DTC124ES			
Q206	8-729-900-36	TRANSISTOR DTC124ES			
		< RESISTOR >			
R227	1-249-381-11	CARBON	1	5%	1/4W (AEP,UK)
R227	1-249-389-11	CARBON	4.7	5%	1/4W (US)
R228	1-249-381-11	CARBON	1	5%	1/4W (AEP,UK)
R228	1-249-389-11	CARBON	4.7	5%	1/4W (US)
R229	1-247-807-31	CARBON	100	5%	1/4W
R230	1-247-807-31	CARBON	100	5%	1/4W
R231	1-247-807-31	CARBON	100	5%	1/4W
R232	1-247-807-31	CARBON	100	5%	1/4W
R233	1-247-807-31	CARBON	100	5%	1/4W
R234	1-247-807-31	CARBON	100	5%	1/4W
R235	1-247-807-31	CARBON	100	5%	1/4W
R236	1-247-807-31	CARBON	100	5%	1/4W
R237	1-247-807-31	CARBON	100	5%	1/4W (AEP,UK)
R238	1-249-429-11	CARBON	10K	5%	1/4W
R239	1-249-429-11	CARBON	10K	5%	1/4W
R240	1-249-429-11	CARBON	10K	5%	1/4W
R241	1-249-441-11	CARBON	100K	5%	1/4W
R242	1-247-807-31	CARBON	100	5%	1/4W (AEP,UK)
R243	1-249-429-11	CARBON	10K	5%	1/4W (US)
R244	1-249-429-11	CARBON	10K	5%	1/4W (US)

Ref. No.	Part No.	Description			Remark
R245	1-249-429-11	CARBON	10K	5%	1/4W
R246	1-249-429-11	CARBON	10K	5%	1/4W
R247	1-249-429-11	CARBON	10K	5%	1/4W
R248	1-249-429-11	CARBON	10K	5%	1/4W
R249	1-249-429-11	CARBON	10K	5%	1/4W
R250	1-247-903-00	CARBON	1M	5%	1/4W
R251	1-249-409-11	CARBON	220	5%	1/4W
R252	1-247-807-31	CARBON	100	5%	1/4W
R253	1-249-429-11	CARBON	10K	5%	1/4W
R254	1-249-429-11	CARBON	10K	5%	1/4W
R255	1-249-437-11	CARBON	47K	5%	1/4W
R256	1-249-417-11	CARBON	1K	5%	1/4W
R257	1-249-421-11	CARBON	2.2K	5%	1/4W
R258	1-249-421-11	CARBON	2.2K	5%	1/4W
R259	1-249-425-11	CARBON	4.7K	5%	1/4W
R260	1-249-429-11	CARBON	10K	5%	1/4W
R261	1-249-433-11	CARBON	22K	5%	1/4W
R262	1-249-437-11	CARBON	47K	5%	1/4W
R263	1-249-417-11	CARBON	1K	5%	1/4W
R264	1-249-421-11	CARBON	2.2K	5%	1/4W
R265	1-249-417-11	CARBON	1K	5%	1/4W
R266	1-249-421-11	CARBON	2.2K	5%	1/4W
R267	1-249-421-11	CARBON	2.2K	5%	1/4W
R268	1-249-425-11	CARBON	4.7K	5%	1/4W
R269	1-249-429-11	CARBON	10K	5%	1/4W
R270	1-249-433-11	CARBON	22K	5%	1/4W
R271	1-249-437-11	CARBON	47K	5%	1/4W
R272	1-249-421-11	CARBON	2.2K	5%	1/4W
R273	1-247-807-31	CARBON	100	5%	1/4W
R274	1-249-417-11	CARBON	1K	5%	1/4W
R275	1-249-421-11	CARBON	2.2K	5%	1/4W
R276	1-249-421-11	CARBON	2.2K	5%	1/4W
R277	1-249-425-11	CARBON	4.7K	5%	1/4W
R278	1-249-429-11	CARBON	10K	5%	1/4W
R279	1-249-433-11	CARBON	22K	5%	1/4W
R280	1-249-437-11	CARBON	47K	5%	1/4W
R281	1-249-417-11	CARBON	1K	5%	1/4W
R282	1-249-421-11	CARBON	2.2K	5%	1/4W
R283	1-249-421-11	CARBON	2.2K	5%	1/4W
R284	1-249-425-11	CARBON	4.7K	5%	1/4W
R285	1-249-429-11	CARBON	10K	5%	1/4W
R286	1-249-433-11	CARBON	22K	5%	1/4W
R287	1-249-437-11	CARBON	47K	5%	1/4W
R288	1-249-429-11	CARBON	10K	5%	1/4W
R291	1-249-429-11	CARBON	10K	5%	1/4W
R292	1-249-429-11	CARBON	10K	5%	1/4W
R293	1-249-429-11	CARBON	10K	5%	1/4W (US)
R294	1-249-429-11	CARBON	10K	5%	1/4W (US)
R295	1-249-429-11	CARBON	10K	5%	1/4W (US)
R296	1-247-807-31	CARBON	100	5%	1/4W
R298	1-249-425-11	CARBON	4.7K	5%	1/4W
R299	1-247-807-31	CARBON	100	5%	1/4W
R300	1-247-807-31	CARBON	100	5%	1/4W
R301	1-247-807-31	CARBON	100	5%	1/4W
R302	1-249-437-11	CARBON	47K	5%	1/4W
R303	1-249-441-11	CARBON	100K	5%	1/4W
R306	1-249-437-11	CARBON	47K	5%	1/4W
R307	1-249-437-11	CARBON	47K	5%	1/4W
R308	1-249-437-11	CARBON	47K	5%	1/4W
R309	1-249-437-11	CARBON	47K	5%	1/4W
R310	1-249-437-11	CARBON	47K	5%	1/4W
R311	1-247-807-31	CARBON	100	5%	1/4W (AEP,UK)
		< ROTARY ENCODER >			
RV201	1-418-725-41	ENCODER, ROTARY (12 TYPE)			(MASTER VOLUME)
		< SWITCH >			
S204	1-771-410-21	SWITCH, TACTILE (3)			
S205	1-771-410-21	SWITCH, TACTILE (6)			
S206	1-771-410-21	SWITCH, TACTILE (9)			
S207	1-771-410-21	SWITCH, TACTILE (DIRECT)			
S208	1-771-410-21	SWITCH, TACTILE (0)			
S209	1-771-410-21	SWITCH, TACTILE (8)			
S210	1-771-410-21	SWITCH, TACTILE (5)			
S211	1-771-410-21	SWITCH, TACTILE (2)			
S212	1-771-410-21	SWITCH, TACTILE (7)			
S213	1-771-410-21	SWITCH, TACTILE (SHIFT)			
S214	1-771-410-21	SWITCH, TACTILE (SLEEP) (US)			
S214	1-771-410-21	SWITCH, TACTILE (PTY) (AEP,UK)			
S215	1-771-410-21	SWITCH, TACTILE (NAME)			
S216	1-771-410-21	SWITCH, TACTILE (FM)			
S217	1-771-410-21	SWITCH, TACTILE (FM MODE)			
S218	1-771-410-21	SWITCH, TACTILE (PRESET TUNING –) (US)			
S218	1-771-410-21	SWITCH, TACTILE (PRESET/PTY SELECT –) (AEP,UK)			
S219	1-771-410-21	SWITCH, TACTILE (TUNING/CHAR –)			
S220	1-771-410-21	SWITCH, TACTILE (TUNING/CHAR +)			
S221	1-771-410-21	SWITCH, TACTILE (MEMORY/ENTER)			
S222	1-771-410-21	SWITCH, TACTILE (1)			
S223	1-771-410-21	SWITCH, TACTILE (4)			
S224	1-771-410-21	SWITCH, TACTILE (BALANCE R)			
S225	1-771-410-21	SWITCH, TACTILE (TREBLE +)			
S226	1-771-410-21	SWITCH, TACTILE (BASS +)			
S227	1-771-410-21	SWITCH, TACTILE (BALANCE L)			
S228	1-771-410-21	SWITCH, TACTILE (TREBLE –)			
S229	1-771-410-21	SWITCH, TACTILE (BASS –)			
S230	1-771-410-21	SWITCH, TACTILE (AM)			
S231	1-771-410-21	SWITCH, TACTILE (PRESET TUNING +) (US)			
S231	1-771-410-21	SWITCH, TACTILE (PRESET/PTY SELECT +) (AEP,UK)			
S232	1-771-410-21	SWITCH, TACTILE (TUNER)			

DISPLAY | HP | MAIN

Ref. No.	Part No.	Description	Remark
S233	1-771-410-21	SWITCH, TACTILE (CD)	
S234	1-771-410-21	SWITCH, TACTILE (MD/TAPE)	
S235	1-771-410-21	SWITCH, TACTILE (VIDEO 2)	
S236	1-771-410-21	SWITCH, TACTILE (VIDEO 1)	
S237	1-771-410-21	SWITCH, TACTILE (MUTING)	
S238	1-771-410-21	SWITCH, TACTILE (BASS BOOST)	
S239	1-771-410-21	SWITCH, TACTILE (DISPLAY)	
		< VIBRATOR >	
X201	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)	
**********			
	1-683-816-11	HP BOARD	
		*********	
		< CONNECTOR >	
CNP801	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
		< JACK >	
J803	1-750-733-11	JACK (LARGE TYPE) (PHONES)	
**********			
	A-4727-875-A	MAIN BOARD, COMPLETE (US)	
	A-4727-881-A	MAIN BOARD, COMPLETE (AEP,UK)	
		**********	
	1-533-223-11	HOLDER, FUSE	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
		< CAPACITOR >	

C402	1-126-964-11	ELECT	10uF	20%	50V
C404	1-126-964-11	ELECT	10uF	20%	50V
C406	1-126-964-11	ELECT	10uF	20%	50V
C408	1-126-964-11	ELECT	10uF	20%	50V
C410	1-126-964-11	ELECT	10uF	20%	50V
C412	1-126-964-11	ELECT	10uF	20%	50V
C413	1-126-794-11	ELECT	4.7uF	20%	50V
C414	1-136-167-00	FILM	0.15uF	5%	50V
C415	1-136-167-00	FILM	0.15uF	5%	50V
C416	1-136-169-00	FILM	0.22uF	5%	50V
C417	1-136-169-00	FILM	0.22uF	5%	50V
C418	1-137-368-11	MYLAR	0.0047uF	5%	50V
C419	1-126-964-11	ELECT	10uF	20%	50V
C420	1-126-794-11	ELECT	4.7uF	20%	50V
C421	1-164-159-21	CERAMIC	0.1uF		50V
C422	1-126-965-11	ELECT	22uF	20%	50V
C424	1-126-964-11	ELECT	10uF	20%	50V
C425	1-126-965-11	ELECT	22uF	20%	50V
C426	1-126-964-11	ELECT	10uF	20%	50V
C452	1-126-964-11	ELECT	10uF	20%	50V
C454	1-126-964-11	ELECT	10uF	20%	50V
C456	1-126-964-11	ELECT	10uF	20%	50V
C458	1-126-964-11	ELECT	10uF	20%	50V
C460	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remark
C462	1-126-964-11	ELECT	10uF	20%	50V
C463	1-126-794-11	ELECT	4.7uF	20%	50V
C464	1-136-167-00	FILM	0.15uF	5%	50V
C465	1-136-167-00	FILM	0.15uF	5%	50V
C466	1-136-169-00	FILM	0.22uF	5%	50V
C467	1-136-169-00	FILM	0.22uF	5%	50V
C468	1-137-368-11	MYLAR	0.0047uF	5%	50V
C469	1-126-964-11	ELECT	10uF	20%	50V
C470	1-126-794-11	ELECT	4.7uF	20%	50V
C471	1-164-159-21	CERAMIC	0.1uF		50V
C472	1-126-965-11	ELECT	22uF	20%	50V
C474	1-126-964-11	ELECT	10uF	20%	50V
C475	1-126-965-11	ELECT	22uF	20%	50V
C476	1-126-964-11	ELECT	10uF	20%	50V
C483	1-126-965-11	ELECT	22uF	20%	50V
C484	1-126-964-11	ELECT	10uF	20%	50V
C485	1-164-159-21	CERAMIC	0.1uF		50V
C490	1-126-935-11	ELECT	470uF	20%	10V
C602	1-128-809-11	CERAMIC	100PF	5%	50V
C603	1-102-233-00	CERAMIC	33PF	10%	500V
C604	1-128-809-11	CERAMIC	100PF	5%	50V
C606	1-126-933-11	ELECT	100uF	20%	16V
C607	1-126-794-11	ELECT	4.7uF	20%	50V
C652	1-128-809-11	CERAMIC	100PF	5%	50V
C653	1-102-233-00	CERAMIC	33PF	10%	500V
C654	1-128-809-11	CERAMIC	100PF	5%	50V
C656	1-126-933-11	ELECT	100uF	20%	16V
C657	1-126-794-11	ELECT	4.7uF	20%	50V
C682	1-128-582-11	ELECT	10uF	20%	100V
C701	1-126-947-11	ELECT	47uF	20%	16V
C702	1-107-597-11	CERAMIC	22PF	10%	500V
C703	1-107-597-11	CERAMIC	22PF	10%	500V
C704	1-128-813-11	CERAMIC	220PF	5%	50V
C705	1-137-372-11	MYLAR	0.022uF	5%	50V
C751	1-126-947-11	ELECT	47uF	20%	16V
C752	1-107-597-11	CERAMIC	22PF	10%	500V
C753	1-107-597-11	CERAMIC	22PF	10%	500V
C754	1-128-813-11	CERAMIC	220PF	5%	50V
C755	1-137-372-11	MYLAR	0.022uF	5%	50V
C781	1-126-934-11	ELECT	220uF	20%	10V
C782	1-126-964-11	ELECT	10uF	20%	50V
C791	1-164-159-21	CERAMIC	0.1uF		50V
C901	1-164-159-21	CERAMIC	0.1uF		50V
C902	1-164-159-21	CERAMIC	0.1uF		50V
C903	1-164-159-21	CERAMIC	0.1uF		50V
C904	1-126-960-11	ELECT	1uF	20%	50V
C905	1-126-936-11	ELECT	3300uF	20%	16V
C906	1-164-159-21	CERAMIC	0.1uF		50V
C907	1-164-159-21	CERAMIC	0.1uF		50V
C908	1-126-964-11	ELECT	10uF	20%	50V
C909	1-126-957-11	ELECT	0.22uF	20%	50V
C910	1-164-159-21	CERAMIC	0.1uF		50V
C911	1-164-159-21	CERAMIC	0.1uF		50V

Ref. No.	Part No.	Description			Remark
C912	1-135-851-21	MYLAR	0.22uF		100V
C913	1-135-851-21	MYLAR	0.22uF		100V
C914	1-165-946-11	DOUBLE LAYERS	6800uF	20%	71V
C915	1-165-946-11	DOUBLE LAYERS	6800uF	20%	71V
C916	1-164-159-21	CERAMIC	0.1uF		50V
C917	1-164-159-21	CERAMIC	0.1uF		50V
C918	1-126-942-61	ELECT	1000uF	20%	25V
C919	1-126-947-11	ELECT	47uF	20%	35V
C920	1-126-947-11	ELECT	47uF	20%	35V
C921	1-126-947-11	ELECT	47uF	20%	35V
C922	1-164-159-21	CERAMIC	0.1uF		50V
C923	1-126-947-11	ELECT	47uF	20%	16V
C924	1-164-159-21	CERAMIC	0.1uF		50V
C925	1-126-933-11	ELECT	100uF	20%	16V
C926	1-164-159-11	CERAMIC	0.1uF		50V (AEP,UK)
C927	1-126-947-11	ELECT	47uF	20%	16V (AEP,UK)
C928	1-126-967-11	ELECT	47uF	20%	50V
C929	1-128-582-11	ELECT	10uF	20%	100V
C930	1-128-582-11	ELECT	10uF	20%	100V
C931	1-164-159-21	CERAMIC	0.1uF		50V
CC401	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC403	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC405	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC407	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC409	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC411	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC451	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC453	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC455	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC457	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC459	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC461	1-128-809-11	CERAMIC	100PF	5%	50V (AEP,UK)
CC701	1-127-876-11	CERAMIC	0.01uF	10%	50V (AEP,UK)
CC703	1-127-876-11	CERAMIC	0.01uF	10%	50V (AEP,UK)
CC751	1-127-876-11	CERAMIC	0.01uF	10%	50V (AEP,UK)
CC753	1-127-876-11	CERAMIC	0.01uF	10%	50V (AEP,UK)

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN3	1-569-060-11	SOCKET, CONNECTOR 11P (US)	
CN3	1-569-321-11	SOCKET, CONNECTOR 15P (AEP,UK)	
CN4	1-568-440-11	SOCKET, CONNECTOR 17P (US)	
CN4	1-569-323-11	SOCKET, CONNECTOR 19P (AEP,UK)	
CN5	1-569-321-11	SOCKET, CONNECTOR 15P	
CNP901	1-564-321-00	PIN, CONNECTOR 2P	
* CNP903	1-564-242-00	PIN, CONNECTOR 5P	
CNP904	1-691-767-11	PLUG (MICRO CONNECTOR) 5P	
* CNP905	1-565-792-11	PIN, CONNECTOR 2P	
		< DIODE >	
D701	8-719-991-33	DIODE 1SS133T-77	
D751	8-719-991-33	DIODE 1SS133T-77	
D781	8-719-991-33	DIODE 1SS133T-77	
D782	8-719-991-33	DIODE 1SS133T-77	
D783	8-719-991-33	DIODE 1SS133T-77	
D784	8-719-991-33	DIODE 1SS133T-77	
D785	8-719-991-33	DIODE 1SS133T-77	
D786	8-719-991-33	DIODE 1SS133T-77	
D787	8-719-991-33	DIODE 1SS133T-77	
D788	8-719-991-33	DIODE 1SS133T-77	
D789	8-719-991-33	DIODE 1SS133T-77	
D901	8-719-200-82	DIODE 11ES2	
D902	8-719-200-82	DIODE 11ES2	
D903	8-719-200-82	DIODE 11ES2	
D904	8-719-200-82	DIODE 11ES2	
D905	8-719-991-33	DIODE 1SS133T-77	
D906	8-719-991-33	DIODE 1SS133T-77	
D907	8-719-072-05	DIODE RBV-602LF-A	
D908	8-719-200-82	DIODE 11ES2	
D909	8-719-200-82	DIODE 11ES2	
D910	8-719-200-82	DIODE 11ES2	
D911	8-719-200-82	DIODE 11ES2	
D912	8-719-936-34	DIODE HZS24LTD	
D913	8-719-109-89	DIODE RD5.6ES-B2	
D914	8-719-200-82	DIODE 11ES2	
D981	8-719-991-33	DIODE 1SS133T-77	
D982	8-719-991-33	DIODE 1SS133T-77	
		< EARTH TERMINAL >	
* EP901	1-537-738-21	TERMINAL, EARTH	
		< IC >	
IC401	6-700-261-01	IC BD3861FS	
IC402	8-759-534-63	IC TC9299P	
IC403	8-759-636-74	IC M5218AP-22	
IC404	8-759-932-33	IC BU4066BC	
IC601	6-700-943-01	IC uPC2581V-S	
IC901	8-759-333-83	IC NJM2103D	
IC902	8-759-701-75	IC NJM7805FA	
IC903	8-759-656-35	IC NJM7810FA	

MAIN

Ref. No.	Part No.	Description	Remark
IC904	8-759-701-75	IC NJM7805FA (AEP,UK)	
		< JACK >	
J801	1-774-411-11	JACK, PIN 6P (CD,MD/TAPE)	
J802	1-793-776-12	JACK, PIN 6P (VIDEO 2,VIDEO 1)	
		< COIL >	
L701	1-422-009-13	COIL, AIR-CORE	
L751	1-422-009-13	COIL, AIR-CORE	
		< TRANSISTOR >	
Q424	8-729-900-36	TRANSISTOR DTC124ES	
Q474	8-729-900-36	TRANSISTOR DTC124ES	
Q680	8-729-900-63	TRANSISTOR DTA124ES	
Q681	8-729-900-36	TRANSISTOR DTC124ES	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q702	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q705	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q706	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q751	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q752	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q755	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q756	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q781	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q782	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q783	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q784	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q785	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q786	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q901	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q902	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
Q903	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q904	8-729-140-97	TRANSISTOR 2SB734-34	
		< RESISTOR >	
R401	1-249-425-11	CARBON 4.7K 5% 1/4W	
R402	1-249-425-11	CARBON 4.7K 5% 1/4W	
R403	1-249-421-11	CARBON 2.2K 5% 1/4W	
R404	1-249-425-11	CARBON 4.7K 5% 1/4W	
R405	1-249-425-11	CARBON 4.7K 5% 1/4W	
R406	1-249-425-11	CARBON 4.7K 5% 1/4W	
R407	1-249-425-11	CARBON 4.7K 5% 1/4W	
R408	1-249-425-11	CARBON 4.7K 5% 1/4W	
R409	1-249-421-11	CARBON 2.2K 5% 1/4W	
R410	1-249-421-11	CARBON 2.2K 5% 1/4W	
R411	1-249-425-11	CARBON 4.7K 5% 1/4W	
R412	1-249-425-11	CARBON 4.7K 5% 1/4W	
R413	1-247-843-11	CARBON 3.3K 5% 1/4W	
R414	1-247-843-11	CARBON 3.3K 5% 1/4W	
R415	1-249-417-11	CARBON 1K 5% 1/4W	
R416	1-249-437-11	CARBON 47K 5% 1/4W	
R417	1-249-433-11	CARBON 22K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R418	1-249-433-11	CARBON 22K 5% 1/4W	
R421	1-249-437-11	CARBON 47K 5% 1/4W	
R422	1-249-433-11	CARBON 22K 5% 1/4W	
R423	1-249-433-11	CARBON 22K 5% 1/4W	
R424	1-249-429-11	CARBON 10K 5% 1/4W	
R425	1-249-425-11	CARBON 4.7K 5% 1/4W	
R426	1-249-425-11	CARBON 4.7K 5% 1/4W	
R427	1-249-441-11	CARBON 100K 5% 1/4W	
R428	1-249-441-11	CARBON 100K 5% 1/4W	
R451	1-249-425-11	CARBON 4.7K 5% 1/4W	
R452	1-249-425-11	CARBON 4.7K 5% 1/4W	
R453	1-249-421-11	CARBON 2.2K 5% 1/4W	
R454	1-249-425-11	CARBON 4.7K 5% 1/4W	
R455	1-249-425-11	CARBON 4.7K 5% 1/4W	
R456	1-249-425-11	CARBON 4.7K 5% 1/4W	
R457	1-249-425-11	CARBON 4.7K 5% 1/4W	
R458	1-249-425-11	CARBON 4.7K 5% 1/4W	
R459	1-249-421-11	CARBON 2.2K 5% 1/4W	
R460	1-249-421-11	CARBON 2.2K 5% 1/4W	
R461	1-249-425-11	CARBON 4.7K 5% 1/4W	
R462	1-249-425-11	CARBON 4.7K 5% 1/4W	
R463	1-247-843-11	CARBON 3.3K 5% 1/4W	
R464	1-247-843-11	CARBON 3.3K 5% 1/4W	
R465	1-249-417-11	CARBON 1K 5% 1/4W	
R466	1-249-437-11	CARBON 47K 5% 1/4W	
R467	1-249-433-11	CARBON 22K 5% 1/4W	
R468	1-249-433-11	CARBON 22K 5% 1/4W	
R471	1-249-437-11	CARBON 47K 5% 1/4W	
R472	1-249-433-11	CARBON 22K 5% 1/4W	
R473	1-249-433-11	CARBON 22K 5% 1/4W	
R474	1-249-429-11	CARBON 10K 5% 1/4W	
R475	1-249-425-11	CARBON 4.7K 5% 1/4W	
R476	1-249-425-11	CARBON 4.7K 5% 1/4W	
R477	1-249-441-11	CARBON 100K 5% 1/4W	
R478	1-249-441-11	CARBON 100K 5% 1/4W	
R481	1-247-807-31	CARBON 100 5% 1/4W	
R482	1-247-807-31	CARBON 100 5% 1/4W	
R483	1-247-807-31	CARBON 100 5% 1/4W	
R484	1-247-807-31	CARBON 100 5% 1/4W	
R485	1-247-807-31	CARBON 100 5% 1/4W	
R602	1-249-439-11	CARBON 68K 5% 1/4W	
R603	1-249-439-11	CARBON 68K 5% 1/4W	
R604	1-249-411-11	CARBON 330 5% 1/4W	
R605	1-249-417-11	CARBON 1K 5% 1/4W	
R652	1-249-439-11	CARBON 68K 5% 1/4W	
R653	1-249-439-11	CARBON 68K 5% 1/4W	
R654	1-249-411-11	CARBON 330 5% 1/4W	
R655	1-249-417-11	CARBON 1K 5% 1/4W	
R681	1-249-437-11	CARBON 47K 5% 1/4W	
R697	1-249-433-11	CARBON 22K 5% 1/4W	
R701	1-249-421-11	CARBON 2.2K 5% 1/4W	
R702	1-249-440-11	CARBON 82K 5% 1/4W	
R703	1-249-414-11	CARBON 560 5% 1/4W	

Ref. No.	Part No.	Description			Remark
R704	1-249-408-11	CARBON	180	5%	1/4W
R705	1-249-408-11	CARBON	180	5%	1/4W
R706	1-233-352-41	COMPONENT, ENCAPSULATED 0.22X2			
R707	1-249-425-11	CARBON	4.7K	5%	1/4W
R708	1-240-855-11	CARBON	6.2K	5%	1/4W
R709	1-249-419-11	CARBON	1.5K	5%	1/4W
R710	1-247-881-00	CARBON	120K	5%	1/4W
R711	1-249-431-11	CARBON	15K	5%	1/4W
R712	1-249-393-11	CARBON	10	5%	1/4W
R713	1-249-437-11	CARBON	47K	5%	1/4W
R714	1-249-389-11	CARBON	4.7	5%	1/4W
R751	1-249-421-11	CARBON	2.2K	5%	1/4W
R752	1-249-440-11	CARBON	82K	5%	1/4W
R753	1-249-414-11	CARBON	560	5%	1/4W
R754	1-249-408-11	CARBON	180	5%	1/4W
R755	1-249-408-11	CARBON	180	5%	1/4W
R756	1-233-352-41	COMPONENT, ENCAPSULATED 0.22X2			
R757	1-249-425-11	CARBON	4.7K	5%	1/4W
R758	1-240-855-11	CARBON	6.2K	5%	1/4W
R759	1-249-419-11	CARBON	1.5K	5%	1/4W
R760	1-247-881-00	CARBON	120K	5%	1/4W
R761	1-249-431-11	CARBON	15K	5%	1/4W
R762	1-249-393-11	CARBON	10	5%	1/4W
R763	1-249-437-11	CARBON	47K	5%	1/4W
R764	1-249-389-11	CARBON	4.7	5%	1/4W
R781	1-249-425-11	CARBON	4.7K	5%	1/4W
R782	1-249-425-11	CARBON	4.7K	5%	1/4W
R783	1-249-425-11	CARBON	4.7K	5%	1/4W
R784	1-249-401-11	CARBON	47	5%	1/4W
R785	1-249-401-11	CARBON	47	5%	1/4W
R786	1-249-425-11	CARBON	4.7K	5%	1/4W
R787	1-249-425-11	CARBON	4.7K	5%	1/4W
R788	1-249-427-11	CARBON	6.8K	5%	1/4W
R789	1-249-437-11	CARBON	47K	5%	1/4W
R790	1-249-417-11	CARBON	1K	5%	1/4W
⚠R792	1-215-868-00	METAL OXIDE	680	5%	1W F
⚠R793	1-215-868-00	METAL OXIDE	680	5%	1W F
R794	1-249-429-11	CARBON	10K	5%	1/4W
R795	1-249-401-11	CARBON	47	5%	1/4W
R901	1-249-425-11	CARBON	4.7K	5%	1/4W
R902	1-249-381-11	CARBON	1	5%	1/4W
⚠R903	1-219-237-11	SOLID	3.3M	20%	1/2W F (US)
R904	1-249-435-11	CARBON	33K	5%	1/4W
R905	1-249-433-11	CARBON	22K	5%	1/4W
R906	1-249-421-11	CARBON	2.2K	5%	1/4W
R907	1-249-428-11	CARBON	8.2K	5%	1/4W
R908	1-249-422-11	CARBON	2.7K	5%	1/4W
R909	1-249-431-11	CARBON	15K	5%	1/4W
R910	1-249-429-11	CARBON	10K	5%	1/4W
R911	1-247-843-11	CARBON	3.3K	5%	1/4W
R912	1-249-417-11	CARBON	1K	5%	1/4W
R913	1-249-401-11	CARBON	47	5%	1/4W

Ref. No.	Part No.	Description			Remark
R914	1-249-425-11	CARBON	4.7K	5%	1/4W
⚠R915	1-240-877-11	FUSIBLE	0.15	5%	1/2W F
R916	1-249-389-11	CARBON	4.7	5%	1/4W
R917	1-249-429-11	CARBON	10K	5%	1/4W
R919	1-249-439-11	CARBON	68K	5%	1/4W
R920	1-249-439-11	CARBON	68K	5%	1/4W
R921	1-247-807-31	CARBON	100	5%	1/4W (AEP,UK)
R922	1-247-807-31	CARBON	100	5%	1/4W (AEP,UK)
R923	1-249-429-11	CARBON	10K	5%	1/4W
R924	1-247-807-31	CARBON	100	5%	1/4W
R925	1-247-807-31	CARBON	100	5%	1/4W
R926	1-247-791-11	CARBON	22	5%	1/4W
R929	1-249-381-11	CARBON	1	5%	1/4W
R930	1-249-381-11	CARBON	1	5%	1/4W
RR701	1-249-393-11	CARBON	10	5%	1/4W (AEP,UK)
RR702	1-249-393-11	CARBON	10	5%	1/4W (AEP,UK)
RR751	1-249-393-11	CARBON	10	5%	1/4W (AEP,UK)
RR752	1-249-393-11	CARBON	10	5%	1/4W (AEP,UK)
		< RELAY >			
RY781	1-755-421-11	RELAY (12V)			
RY782	1-755-421-11	RELAY (12V)			
RY783	1-755-421-11	RELAY (12V)			
RY981	1-755-013-11	RELAY (12V)			
⚠RY982	1-755-334-11	RELAY, AC POWER (9V)			
		< TRANSFORMER >			
⚠T902	1-435-435-11	TRANSFORMER, POWER (AEP,UK)			
⚠T902	1-435-436-11	TRANSFORMER, POWER (US)			
		< TERMINAL BOARD >			
TM801	1-537-376-11	TERMINAL BOARD (SPEAKERS)			
**********					
	1-683-818-11	OUTLET BOARD			
		**********			
		< AC OUTLET >			
⚠CNJ901	1-785-285-11	OUTLET, AC (1P) (AC OUTLET) (AEP,UK)			
⚠CNJ901	1-785-834-11	OUTLET, AC (1P) (AC OUTLET) (US)			
		< CONNECTOR >			
CNP907	1-564-321-00	PIN, CONNECTOR 2P			
**********					

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

POWER SW

Ref. No.	Part No.	Description			Remark
	1-683-817-11	POWER SW BOARD			
		**********			
		< DIODE >			
D205	8-719-046-39	LED SEL5821A-TP15 (SPEAKERS A)			
D206	8-719-046-39	LED SEL5821A-TP15 (SPEAKERS B)			
		< TRANSISTOR >			
Q204	8-729-900-36	TRANSISTOR DTC124ES			
Q205	8-729-900-36	TRANSISTOR DTC124ES			
		< RESISTOR >			
R289	1-249-409-11	CARBON	220	5%	1/4W
R290	1-249-409-11	CARBON	220	5%	1/4W
R297	1-249-417-11	CARBON	1K	5%	1/4W
		< SWITCH >			
S201	1-771-410-21	SWITCH, TACTILE (I/⏻)			
S202	1-771-410-21	SWITCH, TACTILE (SPEAKERS A)			
S203	1-771-410-21	SWITCH, TACTILE (SPEAKERS B)			
**********					
		MISCELLANEOUS			
		**********			
57	1-765-332-11	WIRE (FLAT TYPE) (15 CORE)			
59	1-773-054-11	WIRE (FLAT TYPE) (17 CORE) (US)			
59	1-773-125-11	WIRE (FLAT TYPE) (19 CORE) (AEP,UK)			
⚠105	1-769-744-11	CORD, POWER (AEP,UK)			
⚠105	1-783-820-11	CORD, POWER (US)			
109	1-769-943-11	WIRE (FLAT TYPE) (11 CORE) (US)			
109	1-773-007-11	WIRE (FLAT TYPE) (15 CORE) (AEP,UK)			
⚠F901	1-532-464-31	FUSE (T2.5A/250V) (AEP,UK)			
⚠F901	1-576-109-11	FUSE (5A/125V) (US)			
⚠F902	1-532-464-31	FUSE (T2.5A/250V) (AEP,UK)			
⚠F902	1-576-109-11	FUSE (5A/125V) (US)			
Q703	8-749-010-25	TRANSISTOR MN2488-OPY-M			
Q704	8-749-010-26	TRANSISTOR MP1620-OPY-M			
Q753	8-749-010-25	TRANSISTOR MN2488-OPY-M			
Q754	8-749-010-26	TRANSISTOR MP1620-OPY-M			
⚠T901	1-437-625-11	TRANSFORMER, POWER (US)			
⚠T901	1-437-626-11	TRANSFORMER, POWER (AEP,UK)			
TM301	1-693-533-11	TUNER (FM/AM) (ANTENNA) (AEP,UK)			
TM301	1-693-534-71	TUNER (FM/AM) (ANTENNA) (US)			
**********					

Ref. No.	Part No.	Description	Remark
		ACCESSORIES	
		**********	
	1-477-133-11	REMOTE COMMANDER (RM-U185)	
	1-501-374-11	ANTENNA, LOOP (AM)	
	1-501-594-11	ANTENNA (FM) (AEP,UK)	
⚠	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
	1-793-184-21	CONNECTOR (F TYPE ADAPTOR) (FM ANTENNA)	(US)
	4-228-696-01	COVER, BATTERY (for RM-U185)	
	4-238-304-11	MANUAL, INSTRUCTION (ENGLISH)	
	4-238-304-21	MANUAL, INSTRUCTION (FRENCH,DUTCH, SWEDISH,GERMAN,SPANISH, ITALIAN,POLISH) (AEP)	
	4-238-304-31	MANUAL, INSTRUCTION (DANISH,FINNISH)	(AEP)
	4-238-304-41	MANUAL, INSTRUCTION (PORTUGUESE) (AEP)	

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002. 02	New